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Investigating issues influencing the decision to discuss the content and meaning of voices with people who hear voices

Applying the Theory of Planned Behaviour

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Declaration

This work has not been submitted for any other degree or to any other institution.

Structure and Word Counts

The literature review has been prepared according to the guidance for the Clinical Psychology Review. The research report has been prepared according to the guidance of the British Journal of Clinical Psychology.

Literature Review	
Excluding references and appendices	7,879
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Abstract

Literature Review: Sixteen qualitative and quantitative articles pertaining to professionals' attitudes and responses towards hallucinations in those they care for were reviewed. Professionals' attitudes may be lagging behind the current evidence base, as there seems to be ambivalence towards discussing the content of hallucinations and conflicting evidence as to whether this intervention is being offered. Five studies aimed to change professionals' attitudes and responses by using voice simulation experiences and demonstrated positive outcomes such as increased positive attitudes. In general there was a scarcity of literature on the topic. No studies included carers or used a model to investigate the field therefore the present study addressed this.

Research Report. Objectives: *Part 1.* To investigate pertinent issues when discussing the content of voices with people who hear voices. *Part 2.* To find out what predicts Intention to discuss the content and meaning of voices. **Design:** *Part 1.* Interview study with carers and health and social care staff. *Part 2.* A cross-sectional questionnaire study with carers and health and social care staff. **Methods:** *Part 1.* Interviews were conducted with 3 carers and 10 staff who care for people who hear voices. These were based upon a Theory of Planned Behaviour (TPB) framework and assessed 1) advantages/disadvantages; 2) barriers/facilitators; 3) those who approve/disapprove and 4) feelings when discussing the content of voices. The interviews were categorised into the most frequently occurring issues in relation to each of the four areas. *Part 2*: A TPB questionnaire was constructed based upon the categories identified from the interviews in part 1. This was completed by 142 carers and health and social care staff. **Results:** A hierarchical multiple regression analysis found the TPB was able to significantly predict Intention to discuss the content of voices. No other variables added significantly to the model of prediction. The final model accounted for 58.8 % of variance in Intention. **Conclusions:** The TPB is an effective model in predicting Intention to discuss the content of voices. Intervention studies targeting the issues highlighted could be used to increase Intentions to discuss the content of voices with people who hear voices.

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Literature Review

Abstract

Sixteen qualitative and quantitative articles pertaining to professionals' attitudes and responses towards hallucinations in those they care for were reviewed. Professionals' attitudes may be lagging behind the current evidence base, as there seems to be ambivalence towards discussing the content of hallucinations and conflicting evidence as to whether this intervention is being offered. Five studies aimed to change professionals' attitudes and responses by using voice simulation experiences and demonstrated positive outcomes such as increased positive attitudes. In general there was a scarcity of literature on the topic and no studies included carers or used a model to investigate the field.

Introduction

Aim

The aim of this literature review was to investigate:

What are professionals' attitudes and responses towards hallucinations in those they care for?

Attempts to define hallucinations have proven complex since there can be a variety of hallucinatory phenomena and it is difficult to distinguish between these and other normal or abnormal mental states (Bentall, 1990). Hallucinations are defined in The Diagnostic and Statistical Manual of Mental Disorders: Fourth Edition, (*DSM-IV;* American Psychiatric Association [APA], 1994) as "a sensory perception that has a compelling sense of reality of a true perception, but occurs without external stimulation of the relevant sensory organ." (p. 767). Hallucinations can be experienced though the full range of senses. Although the majority of studies referred exclusively to auditory hallucinations, other kinds of hallucinations were not excluded from this review such that when hallucinations are referred to here, they may encompass a number of modalities. The intention had been to include literature related to carers and untrained staff (e.g. support workers) within this review alongside consideration of professionals' attitudes however unfortunately no relevant articles were yielded in the search, identifying a potentially important gap in the research.

The term 'professionals' will be used throughout to indicate a range of mental health professionals that were included within the studies. These were nurses, psychiatrists, psychologists, speech and language therapists as well as those training in these professions. One article also included individuals referred to as 'mental health technicians' whilst another stated that a small proportion identified themselves as belonging to “other disciplines (e.g. occupational therapy).” In general, the term used for people who experience hallucinations will be the same as that used in the study that is being referred to, such that ‘patient’, ‘client’ and ‘service-user’ will all be used interchangeably in this review.

Professionals’ attitudes towards hallucinations is an important topic for exploration given the power that professionals have in influencing the appraisals people make of their hallucinations (Millham & Easton, 1998). Attitudes can predict behaviour (Ajzen, 1985). We would therefore expect professionals’ attitudes to impact upon their behavioural responses. These attitudes and responses are likely to affect the subsequent care that service-users receive and, in turn, the service-user’s wellbeing (Harrison, Newell, & Small, 2008).

Professionals’ attitudes and responses towards hallucinations will undoubtedly be intertwined with their views of mental illness more broadly. Wahl and Aroesty-Cohen (2009) provide a review of nineteen studies relating to professionals’ attitudes towards mental illness. The majority of studies found largely positive attitudes that compared favourably to the views of the general public, although some negative attitudes were still identified within these studies. A minority of studies found predominantly negative attitudes and expectations, particularly in relation to social acceptance of people with mental health difficulties.

Method

Exclusion and Inclusion Criteria

Peer-reviewed articles were included that were relevant to the aim described. The review was not diagnosis specific, such that studies relating to hallucinations were considered regardless of the type of diagnosis given to participants (including no diagnosis), as this is considered more favourable by many due to the limitations in the validity of diagnostic classifications (e.g. Bentall, Jackson & Pilgrim, 1988). Given the small number of published peer-reviewed articles yielded by the search, one conference presentation was also included.

Cognitive Behavioural Therapy is one form of response that has been made to hallucinations. However, the literature pertaining to this was excluded from this review, as it has been reviewed previously (Dickerson, 2000). Similarly professionals' attitudes toward mental health more broadly were not included due to an existing review (Wahl & Aroesty-Cohen, 2009). Articles relating to the general public's attitudes towards hallucinations were not included in order to produce a more focused review relating to the views and responses of mental health professionals in particular, due to their unique role in service-users lives.

Search Criteria

PsychINFO (1806 – present) and Web of Science (WoS) (1900 – present) electronic databases were searched via the University of Sheffield's website (www.shef.ac.uk/library).

The initial search combined the terms 'hallucination*' AND ('professional* OR staff OR carer*') in the topic field. This search found nine highly relevant articles from a small number yielded. The search was therefore widened to ensure no relevant articles had been omitted. This was done by using 'schizophrenia' or 'psychosis' or 'psychotic' in the topic combined with 'professional*' OR 'staff' OR 'carer*' in topic. This yielded a large number of studies (4,105). The titles (and abstracts where required) were manually searched for relevance to the question. Given the large number of articles, the search was aborted after the most recent 10 % of these had been examined, as no further relevant articles were yielded. In addition, as existing searches had yielded an article on simulating the hallucination experience with staff, another more specific search was conducted to find any further studies using this method. The reference lists of the articles included were manually screened, in case there were any further articles that had not been found by the electronic search. One additional article was included from this method. Appendix A provides details of the search yields and exclusions.

A total of sixteen studies were included in this review, of which there were four qualitative studies, five quantitative studies, two which used mixed methods, two discussion papers, one case study and one conference poster. They were conducted in a variety of countries (see Tables 1, 2 and 3).

Critical Appraisal

Each study was assessed for quality (Tables 1, 2 and 3). Qualitative Studies were assessed using the Public Health Resource Unit (2006) 'Making sense of Evidence' tool (Appendix B). Quantitative Studies were assessed using a tool adapted from Downs and Black (1998) (Appendix C). Both of these produced scores ranging from 0-20 with 20 indicating the maximum possible quality rating such that the quality ratings of the quantitative studies and qualitative studies could be more easily compared. (Although caution should be exercised since the stringency of each rating scale may differ such that scores may not be directly comparable). Where mixed methods were used, both tools were applied and a mean of the two scores was taken. See Appendices A and B for further details of calculation of ratings. An independent reviewer appraised 25 % of the articles (i.e. four studies; two qualitative, one quantitative and one mixed measures). An intra-class correlation found that the average of the scores of the two reviewers were highly reliable ($\alpha = .871$, interval of - .03 to .99 with 95% confidence). All studies were included in the review regardless of their quality rating given the relatively small number of studies in the topic area however their relative quality was taken into account in the review and referred to where relevant.

Content and Structure

The review is divided into the following sections:

- Attitudes and responses of professionals to hallucinations in those they care for
    - Historical context
    - Current findings
- Prevalence of hallucinations within mental health professionals
- Interventions to change attitudes and responses towards hallucinations
- Conclusion

Attitudes and responses of professionals to hallucinations in those they care for

Historical Context

The result of the prevailing biomedical paradigm has been the conceptualisation of hallucinations as symptoms of a disease process. Thus the response has been to provide medication to people who experience hallucinations. This biomedical perspective "judges the content [of delusions and hallucinations] to be irrelevant" (Read & Argyle, 1999). Nurses have therefore traditionally been trained to reinforce reality and not attend to the hallucinations (Coffey & Hewitt, 2008). Core textbooks have previously stressed the need to redirect attention to the real world (Coffey, Higgon & Kinnear, 2004). In one interview a nurse explains, "my training was definitely that you don't talk about the voices" (p. 1595, Coffey & Hewitt, 2008). It has even been suggested that "to pay too much attention to content might be professionally damaging" (Boyle, 1992, cited in Aschebrock, Gavey, McCreanor & Tippett, 2003). England, Tripp-Reimer and Rubenstein (2003) also propose that this policy of non-engagement has its roots in a psychoanalytic perspective in which the defences of people who experience hallucinations have been considered too fragile to endure the "probing challenges of therapy (p.80)."

Recent developments have challenged these perspectives. Cognitive behavioural therapy (CBT) has been successfully applied to hallucinations (e.g. Dickerson, 2000) suggesting that clients can indeed endure the "probing challenges of therapy" (p.80 England et al., 2003). The biomedical approach has been challenged in a number of ways. One such challenge has come through questioning the validity of the psychiatric classification system, in which people who experience hallucinations are often given the label of schizophrenia. The diagnostic categories based upon Kraepelin's (1913) observations have been criticised and Fleming and Martin (2009) provide a useful overview. Critics of the classification of schizophrenia as a discrete syndrome provide three main arguments. These are firstly that there are methodological issues, such as a lack of description and rigour in Kraepelin's data collection methods; Secondly, that despite being categorised as a syndrome, schizophrenia does not have the characteristics of a syndrome. For example, the category of schizophrenia lacks construct validity as its symptoms are not unique to schizophrenia and lacks predictive validity as there is a wide variation in terms of age of onset, course and outcomes (Bentall, Jackson & Pilgrim, 1988). Thirdly, despite a century having passed since Kraepelin's proposal that schizophrenia (known then as dementia praecox) had an organic cause, there has been a failure to confirm this. Whilst there may be some benefits to diagnostic classification such as in providing a common language with which to talk about people's difficulties, Fleming & Martin (2009) argue that overall, it has been damaging since it has provided a 'prognosis of doom' in which a pessimistic outlook is communicated to patients and their families (Andresen, Oades & Caputi, 2003). They propose that the most damaging effect of viewing schizophrenia as a discrete disease is to see those with a diagnosis as fundamentally different from the general population, creating an 'us and them' divide

(Millham & Easton, 1998). This distinction has been challenged by the findings of recent studies in which hallucinations have been found to occur on a continuum in the general population and not just in people who have received a diagnosis of a serious mental health problem. Prevalence estimates vary from 2-15 % (Fleming & Martin, 2009). The research of Romme and Escher (1989) and Read, Agar, Argyle and Aderhold (2003) have demonstrated the role that trauma may have in the development of psychotic experiences or symptoms. This body of research, combined with a number of complex historical, social and political factors has led to the development of a biopsychosocial understanding of hallucinations.

Current Findings

There has been a recent shift in training and perspectives in response to these findings (Coffey & Hewitt, 2008), but it remains to be determined whether or not this has translated into changes in attitudes and responses of professionals. Six studies have directly investigated professionals' attitudes and responses to auditory hallucinations (Aschebrock et al., 2003; Coffey et al., 2004; Coffey & Hewitt, 2008; Harrison et al., 2008; Wahass & Kent, 1997; Walsh, 2011). These studies were conducted with a variety of professionals in a range of countries. Three were of a good scientific standard, two were moderate and one was poor[1] (see Table 1 for details). In addition, there were three discussion articles, which could therefore not be assessed using the study appraisal tools. One article compared Spiritists to mental health professionals on the recognition and treatment of psychotic symptoms in Puerto Rico and Brazil, by discussing two studies that used case studies and in depth interviews with Spiritists. However, the article focused primarily upon Spiritists views and there were only a few

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[1] These categories were created by the author as there are no standard ranges given by Downs & Black (1998). Their mean for non-randomised studies was 11.7 therefore the author assigned studies with scores of 11-13 as 'moderate' and anything above this as 'good' and below it 'poor'

brief references to the professionals (Moreira-Almeida & Koss-Chioino, 2009). It will therefore not be considered further here. Two discussion papers related to Hearing Voices Groups and will be considered below (Corren & Lucas, 2004 and Martin, 2000).

Table 1.

Studies Investigating Attitudes and Responses of Professionals to Hallucinations

Reference	Participants	Origin of Sample	Method	Main Strengths	Main Limitations	Quality Rating [a] (0-20)	Appraisal Tool [b]
Aschebrock et al. (2003)	58 mental health practitioners	NZ, UK, USA, Australia, Canada, South Africa	Survey on participants' views on the value of attending to the content of delusions and hallucinations	- Inclusion of several different types of professionals, and countries of work. - Addresses a neglected research area.	- No description of the analysis used. - It is not clear exactly what questions were asked.	15	2
Coffey & Hewitt (2008)	20 service-users and 20 corresponding CMHN'S	Wales	A thematic content analysis of interviews	- Matching of clients to their CMHNs and inclusion of both within the study. - Important clinical implications	- Appears to use the same sample and quotations as their previous study without acknowledgement. - No identification of who the interviewer is or discussion of their role. - Most interview questions not stated: only one example	17	1

[a] Adapted from Downs and Black, 1998 and Public Health Resource Unit (2006) – see Appendices B and C

[b] 1= Qualitative Study Appraisal Tool, 2= Quantitative Study Appraisal Tool, 3 = Mean of 1 and 2

Table 1 (continued).

Studies Investigating Attitudes and Responses of Professionals to Hallucinations

Reference	Participants	Origin of Sample	Method	Main Strengths	Main Limitations	Quality Rating[a] (0-20)	Appraisal Tool [b]
Coffey et al. (2004)	20 community mental health service-users	Wales	Qualitative and quantitative Likert ratings of 16 statements, interviews and Beliefs about Voices Questionnaire (BAVQ-r)	Inclusion of service-user perspectives	- The write up lacks a clear thread linking aims to findings. - Weak discussion	14	3
Corren & Lucas (2004)	‘Graham’ who hears voices	UK	A case study of ‘Graham’s’ experience of a Hearing Voices Group	The article is written in a distinctly positive tone using the empowering recovery approach.	The standard limitations of case studies e.g. lack of generalisability	N/A (case study)	N/A

[a] Adapted from Downs and Black, 1998 and Public Health Resource Unit (2006) – see Appendices B and C

[b] 1= Qualitative Study Appraisal Tool, 2= Quantitative Study Appraisal Tool, 3 = Mean of 1 and 2

Table 1 (continued).

Studies Investigating Attitudes and Responses of Professionals to Hallucinations

Reference	Participants	Origin of Sample	Method	Main Strengths	Main Limitations	Quality Rating[a] (0-20)	Appraisal Tool [b]
Harrison et al. (2008)	22 people with a diagnosis of schizophrenia	UK	Unstructured interviews with the main question asked of: "How do you live your life with a diagnosis of schizophrenia?"	- Interesting interview extracts and findings. - Important implications for clinical practice.	- Lack of detail of methods e.g. no discussion of recruitment method - No clear aims stated - No description of the analysis used - Inaccuracies in reference list.	9	1
Martin (2000)	Discussion paper	UK	Discussion of the experience of a Hearing Voices Group.	Effective consideration of how their work links to existing literature and theories	Disclosure of author's role as facilitator of the group is not made until near the end of the article	N/A (discussion paper)	N/A
Moreira-Almeida & Koss-Chioino	164 Spiritist mediums and 22 patients	Puerto Rico and Brazil	A discussion of two studies to compare Spiritists' approach to mental health professionals'.	Considers an under-studied phenomenon.	- There is no explanation of the analysis used - The writing is not easy to comprehend.	N/A (discussion paper)	N/A

Table 1 (continued).

Studies Investigating Attitudes and Responses of Professionals to Hallucinations

Reference	Participants	Origin of Sample	Method	Main Strengths	Main Limitations	Quality Rating [a] (0-20)	Appraisal Tool [b]
Wahass & Kent (1997)	195 psychologists and psychiatrists working in Saudi Arabia and Britain	SA and UK	A questionnaire comparing the cultural and professional differences of attitudes towards auditory hallucinations	Clear rationale for the study Important clinical implications	There is no analysis section provided	13	2
Walsh (2011)	1 SALT, 2 SALT students and 3 people with chronic schizophrenia	Unspecified	Qualitative analysis of conversations during clinical sessions	Useful illustrative extracts provide a rich understanding	- Not clear exactly which steps were taken in analysis. - Weak discussion e.g. no consideration of relation to the wider literature	12	1

[a] Adapted from Downs and Black, 1998 and Public Health Resource Unit (2006) – see Appendices B and C

[b] 1= Qualitative Study Appraisal Tool, 2= Quantitative Study Appraisal Tool, 3 = Mean of 1 and 2

Wahass and Kent (1997) conducted a cross-cultural study of the attitudes of mental health professionals towards auditory hallucinations by surveying 195 psychologists and psychiatrists working in Saudi Arabia (SA) and the United Kingdom (UK). Although the authors acknowledge the possibility that gender and training were confounding factors, the results were suggestive of several cross-cultural differences. Although most staff in both cultures agreed that hallucinations could be an indicator of schizophrenia, more UK professionals believed that a general diagnosis of psychosis would be appropriate or that no diagnosis is necessarily needed, suggesting that the Saudi Arabian professionals may have a more traditional view of diagnostic classification. UK professionals were more likely to cite environmental factors such as negative childhood events as causative factors whereas the SA staff tended to take a more medical view of hallucinations. However, interestingly, the SA professionals were more optimistic about the effectiveness of psychological treatments. They were also more optimistic about interventions more broadly, including pharmacological interventions. The majority of professionals in both cultures believed that psychological treatments are only effective in fewer than half of patients. Since treatment implementation will be dependent upon interest and confidence, it is noteworthy that there is considerable hesitation in the minds of professionals in the UK and SA in relation to psychological interventions for hallucinations. SA professionals reported desiring greater social distance from people with hallucinations than UK staff. For example UK staff were more likely to disagree with the statements ‘would prefer not to be in employment with’ and ‘would discourage anyone in their family from marrying’ someone who experiences auditory hallucinations.

Two articles relate exclusively to UK professionals and are suggestive that despite being more psychosocially focused than their SA counterparts, a biomedical focus may still prevail. Coffey et al. (2004) interviewed people who hear voices and their community psychiatric mental health nurses (CMHNs). A later study appears to report upon the same sample using a mixed methods approach that included recording responses to statements on a Likert scale (Coffey & Hewitt, 2008). In the latter study people saw the care they received from their CMHNs as limited in its range with a clear emphasis on a medical paradigm. When they reported a change in their voices, many said their CMHN's response was usually to refer to the psychiatrist for an increase in medication. Many participants said they would like to discuss their voices with their CMHNs, but the CMHNs expressed limitations in their ability to offer this. For example 'Lucy' said "I think sometimes…um for some clients we can make the situation worse" (p.1594). There seemed to be a mismatch between the perceptions of service-users and CMHNs reminding of the importance of gaining multiple perspectives. Nurses viewed their own responses as logical, considered, expert and varied according to their clients' personal needs. Service-users indicated a different perception and in many cases reported experiencing an inadequate response from nurses to their distress.

Harrison et al. (2008) propose that nurses' responses are not only inadequate but can actually be disempowering and unhelpful to service-users. They conducted interviews with twenty-two people with a diagnosis of schizophrenia in the UK, and, based on their findings, argued that professionals' responses could cause more distress than the hallucinations themselves: "The voices aren't pleasant, but I can cope with them most of the time. It's what other people do to me that really bothers me (p. 18). " Denial of the reality of their voices made participants feel distressed. When they spoke about their voices in hospital they were given medication and reported that no one wanted to discuss the voices with them. The participants' main response was to stop talking about the voices and to pretend that they no longer experienced them. These findings need to be interpreted with caution, however, as the study received a low rating for quality and had a number of important limitations such as a failure to provide sufficient details of the analysis (see Table 1). Nevertheless other sources support this view. For example, Weisman (1981) puts forward that it "is wholly possible that some of the distress suffered by patients might be iatrogenic, namely, the result of emotional burdens felt by caregivers and secondarily placed on patients." (p.162) This was in relation to cancer patients but it also seems pertinent to those experiencing hallucinations.

Walsh (2011) conducted a qualitative analysis of conversations between a speech and language therapist (SALT), two SALT students and three people with schizophrenia within routine clinical sessions. The SALT's primary agenda was to interact with the client for assessment and therapeutic purposes, which was sometimes conducted at the cost of 'hushing' other talk. This was particularly the case where conversations were delusional and seemingly irrelevant to the SALT's agenda. However talk about the nature of the illness, in particular the experience of hallucinations, and their impact upon communication was considered compatible with the SALT's agenda and was allowed to proceed. Therefore the 'voice of schizophrenia' is "silenced *within* delusional talk, yet heard in talk *about* hallucinatory experience" (p. 81).

Aschebrock et al. (2003) surveyed fifty-eight mental health practitioners across a range of disciplines and countries to discover their views on the value of attending to the content of delusions and hallucinations. Whilst a small number saw little or no benefit in this practice, most (84%) listed both benefits and drawbacks. Benefits included increased understanding of clients' difficulties, improvements in the therapeutic relationship, and an enhanced ability to assess risk and address safety issues. One fifth of respondents suggested that their work would be adversely affected if they discussed the content of delusions and hallucinations. Drawbacks included concern about being distracted from other more important topics, the potential to inadvertently reinforce the content of hallucinations, fear of causing distress, and the possibility of professionals themselves losing touch with reality. Some even felt they would suffer "ridicule from other professionals (p. 308)." This is reminiscent of the quote from a decade previously that "to pay too much attention to content might be professionally damaging" (Boyle, 1992, cited in Aschebrock et al., 2003, p 306) suggesting that the shift in training and perspectives described earlier may indeed not have translated fully into professionals' attitudes and behaviours. Despite ambivalence towards the practice, most respondents indicated that they do however routinely attend to the content of hallucinations and delusions with every client.

There is evidence to suggest that many people who experience hallucinations would like to discuss their experience with professionals, including a focus on the content and potential meaning of their hallucinations. Several participants interviewed for different studies have expressed this desire (Coffey & Hewitt, 2008; Harrison et al., 2008). Evidence from the CBT literature suggests that this approach may be helpful (e.g. Dickerson, 2000). It is interesting that several professionals who considered that they were encouraging discussion about the content and meaning of voices were not perceived to be doing this by those people that they cared for (Coffey & Hewitt, 2008). Millham & Easton (1998) suggest that by taking a non-judgemental stance, hallucinations might be explored with clients, thus fostering the kind of relationships required for therapeutic change. Many now believe that the content of hallucinations is meaningful and can be understood in the context of a person's past experiences, echoing Jung's (1963) observation that "through my work with patients I realised that…hallucinations contain a germ of meaning…The fault is ours if we do not understand them" (p. 96, Millham & Easton, 1998).

Evidence suggests that many people who hear voices also wish to discuss their experiences with other people who hear voices (e.g. Coffey & Hewitt, 2008). The

Hearing Voices Movement encouraged professionals to assist people who hear voices in meeting with other people with similar experiences in order to diminish the taboo and isolation (Romme & Escher, 1993). Corren and Lucas (2004) describe the case study of ‘Graham’ and his experience of a hearing voices group. Graham (not his real name) experienced hallucinations for a number of years and had several hospital admissions. He was quite isolated in his experience and expressed a keen interest in attending the first group. He was able to talk openly about his experiences, which encouraged others to do the same and he appeared to benefit greatly from learning about common experiences, as well as discovering what was unique to his… “I suddenly felt I was not on my own anymore” (p.17). He reported having gained a sense of identity and something to be proud of through his involvement in the group, and he established himself in a leadership role within a self-help group set up in between the facilitated meetings. Graham managed to return to study and work and became increasingly more accepting of his voices.

There will of course always be differences amongst individuals’ preferences for talking about shared experiences of auditory hallucinations. Whilst one person said that by talking to others “it made me feel good, and normal” (p.18, Harrison et al., 2008), another said “the last bloody thing I’d want to do is talk about…somebody else’s illness…I have enough of my own” (p.1597, Coffey & Hewitt, 2008).

Martin (2000) describes his experience of facilitating a Hearing voices group in the UK. Like Graham, the evaluation of this group also identified several positive outcomes, including an increase in confidence, members realising they were not alone and understanding both the common and unique elements to their experiences. Martin (2000) offers some advice based on what he has learnt from his experience. He proposes that our professional understanding of voice hearing is often minimal and therefore suggests using Parse’s (1992) nursing theory, in which a nurse is not concerned with offering “value laden advice and opinions” but attempts to facilitate understanding of an experience in a way that has meaning for the person (p.40, Parse, 1992). Middleboe and Mortenson (1997) argue that professionals should “guide the patient towards beneficial coping strategies” (p.194). Martin (2000) points out that this assumes that professionals know best how to manage an individual’s hallucinations. Instead, the therapeutic relationship should be focused upon ‘being with’ rather than ‘doing for.’ Martin (2000) argues that by so doing, one is far from passive but is required to constantly monitor and evaluate the process. In order to maintain this stance, he recommends supervision from other experienced clinicians as well as through developing one’s own ‘internal supervisor.’ Since the experience of hallucinations often changes, he suggests that the value of a professional is in the ability to provide continuity, to help weather the “storms of good times and bad times” (p.138). Like other critics of the diagnostic classification system, he suggests that professionals should concern themselves less with gaining precise diagnoses and rather focus upon empowering service-users, as “experts in their own lives” (p.19 Harrison et al., 2008).

Prevalence of Hallucinations within professionals

Several studies have found that a proportion of the general population experience hallucinations (Johns & van Os, 2001). Prevalence estimates vary from 2-15 % (Fleming & Martin, 2009). Two studies have been conducted to assess the prevalence of hallucinations within mental health practitioners (Fleming & Martin, 2009; Millham & Easton 1998) (see Table 2). Eighty-four percent of the 79 nurses and student nurses who returned the questionnaire described having had their own experiences of auditory hallucinations (Millham & Easton, 1998). For example, participants indicated that they had heard a voice from the back of the car, a doorbell, or their own name in the absence of an external source. Similarly, Fleming and Martin (2009) found that 16% of their sample of 121 mental health practitioners indicated that they had experienced hallucinations as rated on the Psychotic Symptom Rating Scale (PSYRATS). In addition, the Spiritist healers reported a high level of dissociative and psychotic experiences but a sound social adjustment score (Moreira-Almeida & Koss-Chioino, 2009). There is evidence to suggest that professionals may therefore have higher levels of hallucination experiences than the general public. This relatively high prevalence of hallucinations may have important implications for the way in which professionals respond to hallucinations in those they care for. For example, Millham and Easton (1998) hope that the high prevalence of auditory hallucinations found amongst nurses could lead toward professionals accepting these experiences and seeking “to understand them through perceiving them as similar to their own rather than fundamentally different, incomprehensible or even ‘schizophrenic’” (p. 98 Millham & Easton, 1998). This would allow them to discuss commonalities with their clients and thus help normalise their clients’ experiences. It is likely that psychotic experiences exist on a continuum of severity between mental health and mental illness (Johns & van Os, 2001).

Table 2.

Studies Assessing Prevalence of Hallucinations in Professionals

Reference	Participants	Origin of sample	Method	Strengths	Limitations	Quality Rating^{a} (0-20)	Appraisal Tool ^{b}
Fleming & Martin (2009)	121 mental health practitioners	Scotland	Completed the HADS and PSYRATS	Three clear aims presented and considered in the discussion	Very basic and brief statistical analysis	18	2
Millham & Easton (1998)	55 nurses	UK	13 statements taken from Posey & Losch's (1983) questionnaire on experiences of auditory hallucinations	Comprehensive discussion Important clinical implications	Very brief and superficial analysis of data Lack of detail on recruitment	15	2

[a] Adapted from Downs & Black, 1998 and Public Health Resource Unit (2006) – see Appendices B and C

[b] 1= Qualitative Study Appraisal Tool, 2= Quantitative Study Appraisal Tool, 3 = Mean of 1 and 2

Interventions aimed at changing attitudes and responses towards hallucinations

It has been suggested that professionals' attitudes may need to be targeted for intervention, given that their attitudes are not markedly different from the (often negative) attitudes held by the general population (Dearing & Steadman, 2009). As attitudes are linked to intentions and behaviours (Ajzen, 1985), they may affect the care that service-users receive. There were five studies aimed specifically at improving professional’s attitudes and responses towards those who experience auditory hallucinations (Bunn & Terpstra, 2009; Dearing & Steadman, 2008; Dearing & Steadman, 2009; Galletly & Burton, 2010; Wilson, 2009). Table 3 describes the key components of the studies and provides a critical appraisal. Four involved Deegan’s (2006) Voice Simulation Exercise (VSE) and the fifth also appears to have used this, although it is not specified (Galletly & Burton, 2010).

Evidence suggests that traditional lectures are not effective at modifying attitudes of students towards people with mental and physical illnesses, including schizophrenia (Dearing & Steadman, 2008), and thus educational facilities are turning their attention towards other tools such as simulation experiences (Karlowicz & Palmer, 2006). The Voice Simulation Exercise (VSE) is one such tool. In addition to the aforementioned VSE studies conducted with professionals, a handful of simulation studies have been carried out with the general public (Brown, 2008; Brown, 2010; Brown, Evans, Espenschade & O’Conner, 2010; Shin et al., 2009). The findings from these have been mixed, with two studies actually showing an increase in stigma after the simulation, such as less willingness to help someone with mental illness (Brown, 2008; Brown, 2010).

In addition to the VSE, other tools are being developed to simulate a greater range of hallucinations. The 'mindstorm system' involves a multisensory film designed to simulate hallucination experiences in 3D, in an eleven-seat virtual reality cinema in New Jersey. This includes sights, sounds, breezes and disturbing smells and is aimed at trainee medical professionals and academics. Development is underway for more portable formats such as a mobile van, in order to widen its use (Tabar, 2007). Tabar’s (2007) discussion paper described the system but no empirical studies have been conducted to the author’s knowledge, and although they mentioned hand-held simulation devices that have been in use for some years as an awareness-training tool for law enforcement, emergency services, and crisis intervention teams across the USA, there are no known empirical studies utilising this to date. A more accessible tool has been developed using an internet-based virtual reality system to simulate auditory and visual hallucinations (Yellowlees & Cook, 2006). Shin et al. (2009) developed simulations using a head-mounted display (HMD), orientation tracking sensor, and a joystick. No studies were found using these with professionals.

The VSE was created by Deegan (2006), a clinical psychologist, who has heard voices herself. The package, and therefore the studies described below included listening to a one-hour video lecture, featuring Deegan discussing the literature and experience of hearing voices, and then listening to a CD that simulated the voice hearing experience for 45 minutes, whilst completing various tasks. The CD included an unpredictable combination of whispers, novel sounds and intrusive words or phrases, designed to be similar to the voice-hearing experience (Wilson et al., 2009). There have been two qualitative studies (Dearing & Steadman, 2009; Wilson, 2009), one quantitative study (Bunn & Terpstra, 2009) and two mixed measures studies (Dearing & Steadman, 2008; Galletly & Burton, 2010), investigating the impact of the VSE upon professionals, although one of these was only available as a poster as the full article had not been published (Galletly & Burton, 2010). All the studies that could be assessed for quality were within the ‘good’ range[2] (see Table 3). Three studies were conducted in the USA, one in Canada and one in Australia (see Table 3).

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[2] These categories were created by the author as there are no standard ranges given by Downs & Black (1998). Their mean for non randomised studies was 11.7 therefore the author assigned studies with scores of 11-13 as ‘moderate’ and anything above this as ‘good’ and below it ‘poor’

Table 3.

Summary of Studies Using Interventions to Improve Attitudes and Responses to Hallucinations

Reference	Participants	Origin of sample	Method	Results	Main Strengths	Main Limitations	Quality Rating [a] (0-20)	Appraisal Tool[b]
Bunn & Terpstra (2009)	150 medical students (Of which 50 were controls)	USA	The Jefferson Scale of Physician Empathy, Student version, is measured pre and post VSE	Paired sample t-test shows that empathy scores increased after experiencing the simulation (no significant change in controls)	- Large sample - Well reported	- Not clear how many declined participation - Self-report measure - No mention of other simulation studies (but consideration of other relevant literature)	18	2

[a] Adapted from Downs and Black, 1998 and Public Health Resource Unit (2006) – see Appendices B and C

[b] 1= Qualitative Study Appraisal Tool, 2= Quantitative Study Appraisal Tool, 3 = Mean of 1 and 2

Table 3 (continued).

Summary of Studies Using Interventions to Improve Attitudes and Responses to Hallucinations

Reference	Participants	Origin of sample	Method	Results	Main Strengths	Main Limitations	Quality Rating [a] (0-20)	Appraisal Tool[b]
Dearing & Steadman (2008)	94 nursing students (Of which 42 were controls)	USA	- Medical Condition Regard Scale (MCRS) and focus groups following VSE during which participants completed various tasks. - Control group: standard orientation. No VSE or tasks.	- Both experimental group and control group MCRS scores changed significantly. Significant difference in post-test MCRS scores between the two groups ($p < .001$). - Focus group: themes of affective experience, physical experience and empathy.	- Large sample - The use of a standardised questionnaire with good validity, test-retest reliability (0.84) and alpha coefficient of items (0.87).	- Lack of consideration of ethical issues - Not clear how many declined participation - Lack of clarity in description of how participants were assigned to the experimental or control group.	14.5	3

Table 3 (continued).

Summary of Studies Using Interventions to Improve Attitudes and Responses to Hallucinations

Reference	Participants	Origin of sample	Method	Results	Main Strengths	Main Limitations	Quality Rating [a] (0-20)	Appraisal Tool[b]
Dearing & Steadman (2009)	28 nursing students (taken from Dearing & Steadman, 2008)	USA	Narrative investigation of reflective writing following VSE during which participants completed various tasks.	Themes of Intense Feelings, Incoherent thinking, Hassled being, Intellectual Knowing and Apt Acting.	Rich, detailed discussion of results and use of extracts gives a vivid account. Good literature review	Not clear how many declined participation. No consideration of relationship between researcher and participants and any potential biases	14	1

Table 3 (continued).

Summary of Studies Using Interventions to Improve Attitudes and Responses to Hallucinations

Reference	Participants	Origin of sample	Method	Results	Main Strengths	Main Limitations	Quality Rating[a] (0-20)	Appraisal Tool[b]
Galletly & Burton (2010)	87 final year medical students	Australia	Three-hour workshop that included the VSE. Attitudes to Mental Illness Questionnaire (AMIQ) compared pre and post intervention. Descriptive reflection also written.	Significant improvement in students' attitude scores following the workshop (t (86) = -4.22, p < .001).	Inclusion of experience of interacting with another person whilst that person is experiencing auditory hallucinations.	Unable to determine (poster)	N/A (poster)	N/A (poster)

[a] Adapted from Downs and Black, 1998 and Public Health Resource Unit (2006) – see Appendices B and C

[b] 1= Qualitative Study Appraisal Tool, 2= Quantitative Study Appraisal Tool, 3 = Mean of 1 and 2

Table 3 (continued).

Summary of Studies Using Interventions to Improve Attitudes and Responses to Hallucinations

Reference	Participants	Origin of sample	Method	Results	Main Strengths	Main Limitations	Quality Rating [a] (0-20)	Appraisal Tool[b]
Wilson (2009)	27 nursing students	Canada	Written response to three open-ended prompts following VSE	Three major themes identified: awareness vs. discomfort; awakened to the challenge; and transformed through empathy. All participants supported the use of the VSE.	- Well reported. - Good consideration of relevant literature and issues.	- It is not clear whether any potential participants declined involvement initially. - The researcher has not discussed their own role and potential biases.	18	1

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[a] Adapted from Downs and Black, 1998 and Public Health Resource Unit (2006) – see Appendices B and C

[b] 1= Qualitative Study Appraisal Tool, 2= Quantitative Study Appraisal Tool, 3 = Mean of 1 and 2.

The outcome measure for Bunn and Terpstra (2009) was a questionnaire measure of empathy. They argue that empathy plays a major role in the doctor-patient relationship and cite several articles demonstrating that it is directly related to clinical outcomes, professional and patient satisfaction and patient adherence to medical recommendations. Similarly, Dearing and Steadman (2009) sought to describe the qualitative impact of the simulation upon nurses' empathy. They propose that enhancing empathy can improve the opportunity for developing a therapeutic relationship. They argue that like other skills, empathy can be taught and learnt. The other studies focused upon related concepts of stigma, stereotyping, biases and attitudes. Galletly and Burton (2010) used the Attitudes to Mental Illness Questionnaire whilst Dearing and Steadman (2008) used the Medical Condition Regard Scale. All three studies with a quantitative component used standardised measures.

All the studies included cognitive tasks or games such as answering simple maths problems. Two studies included interacting with peers by walking around the medical centre or purchasing a beverage for example (Bunn and Terpstra, 2009; Wilson et al., 2009).

The studies all found the desired effect of the VSE upon their chosen outcomes.

Quantitative Findings

Bunn and Terpstra (2009) demonstrated an increase in empathy for the VSE group and no change in the control group. Both Galletly and Burton (2010) and Dearing and Steadman (2008) reported significant improvements in attitude scores of their respective measures. However, Dearing and Steadman (2008) found that the scores of the control group who experienced the standard orientation to their new placements also changed significantly on the Medical Condition Regard Scale; although the change in the VSE group was greater than in the controls. The scores for the VSE group for the variables

"There is little I can do to help patients like this" and "Treatment for these patients is a waste of money" were significantly different from those of the control group.

Qualitative Findings

Changes in attitude and empathy were also reported in the qualitative studies. Galletly and Burton (2010) reported that students found the workshop useful and described a better understanding of the everyday difficulties of living with hallucinations. There was no further information, as the report was a poster. However, there were three other studies with a qualitative component (Dearing & Steadman, 2008; Dearing & Steadman, 2009; Wilson et al., 2009). Dearing & Steadman (2009) used twenty-eight of the fifty two participants of their 2008 study chosen due to their more extensive accounts. This may have biased the findings, since it could be reasonably hypothesized that those who wrote more may have been more strongly impacted by their experience, or conversely, that the experience of spending longer writing and reflecting could have brought about any changes rather than the VSE itself. Indeed, the accounts in the 2009 study certainly seem more vivid and extreme than those of the 2008 study, although as one would expect, similar themes arose. Wilson et al.'s (2009) findings were also quite similar.

Participants described 'Intense Feelings' such as vulnerability, fear, anger and anguish: " I felt my demeanour darken as I became more and more aware of the voices I was hearing. It was scary. I felt that I did not matter to anyone. I felt paranoid and alone" (p. 177 Dearing & Steadman, 2009). The themes of 'Worn Out' (Dearing & Steadman, 2008), 'Incoherent Thinking', 'Hassled Being' *(*Dearing & Steadman, 2009) and 'Awareness vs. Discomfort' (Wilson et al., 2009) all emphasised the physical effects of the experience, such as exhaustion, difficulty concentrating and feeling physically unwell: "Listening to the voices constantly saying unpleasant and mean things about me really annoyed me to the point where I did not feel well. It was really interesting for me to start to feel this way because I hardly ever get headaches and I rarely feel sick" (p178, Dearing & Steadman, 2009). All three studies discussed an increase in insight, empathy and respect for people who hear voices through the themes of 'Intellectual Knowing' (Dearing & Steadman, 2009), 'Feel things Out' (Dearing & Steadman, 2008) and 'Awakened to the Challenge' (Wilson et al., 2009). The experience provided an "insiders view" (p.10 Wilson et al., 2009) e.g. " All of a sudden a rush of empathy for those who suffer from hearing voices filled me" (Dearing & Steadman, 2009). All three studies found themes related to a change in professional practice, although all three studies asked about this in their interview questions. Dearing and Steadman (2008) found that participants expressed a desire to improve their ability to interact with patients, to suspend judgment and try to be more understanding. The theme of 'Conscientious Caregiver' arose in which participants felt they should research the illness further (Dearing & Steadman, 2008). Wilson et al.'s (2009) participants felt 'Transformed through Empathy' and saw their experience as a catalyst for change. In Dearing and Steadman (2009) 'Apt Acting' meant " I gained a better understanding of myself and how I need to change in order to establish and evaluate my therapeutic relationship with patients." (P.180, Dearing & Steadman, 2009).

Although all the studies refer to the vulnerability felt by the participants, particularly upon interacting with others, only one mentions the response (or perceived response) of others: " I found myself getting annoyed with the negative things the voices were saying and even more frustrated with the way everyone around me was treating me" (p.178, Dearing & Steadman, 2009). All of the participants supported the use of the simulation exercise and several recommended that it be part of the curriculum for all nursing students (Wilson et al., 2009).

Critique and Further Research

A limitation of all the intervention studies, was the failure to include follow-up measures to investigate the longer-term impact of the simulation experiences. The studies were all based upon self-report measures and all used nursing or medical students. Therefore, further research should be conducted, to investigate the long-term efficacy of the simulation, including other measures, such as service-user ratings on a larger range of professionals. It could also be extended to use with families and carers. This could be valuable, given the simulation's potential for the improvement of service-users' experiences of mental health and psychological care. However, its efficacy must be investigated further, given the financial burden of providing the simulation and the mixed findings from the studies using the public, which suggest the potential for a negative effect on attitudes.

Discussion

There is a scarcity of literature investigating professionals' attitudes and responses towards hallucinations in particular. The studies related to this, all relied upon convenience samples. It is therefore difficult to ascertain how representative their samples were of the population as a whole, given that it might be that those who had particularly strong views on the topic volunteered themselves to take part. However, the evidence suggests that despite recent shifts in academic perspectives and training, this may not have translated fully into changes in the attitudes and behaviours of practising clinicians. Several studies demonstrated a predominantly biomedical perspective and a reluctance to engage in discussions about the content of hallucinations. Therefore there appears to be a discrepancy between current theory, which emphasises a biopsychosocial perspective, and clinical practice, which according to these studies, appears to take a more biomedical approach. However, findings were mixed and there was considerable ambivalence amongst professionals. Crawford, Brown, Anthony and Hicks (2002) propose that professionals may be “reluctant empiricists, resisting the overtures of evidence-based practice as a means to retain a sense of control over their work” (p. 1598). If theory and evidence are not being translated into practice then this has important clinical implications for the care that people receive.

The evidence suggests that whilst there are individual differences, many people who experience hallucinations would like to discuss these with their workers and/or with others who experience hallucinations. An important clinical implication then is that professionals should consider providing these opportunities, if discussing the content of hallucinations is found to be beneficial. However, Coffey and Hewitt (2008) suggest that service-users may not be fully informed of the full range of interventions available due to the reluctance of some professionals to provide these. In addition, it is interesting that several professionals who considered that they were encouraging discussion about the content and meaning of voices were not perceived to be doing this by those people that they cared for (Coffey & Hewitt, 2008). This is a useful reminder of the importance of gaining feedback from clients. There is some evidence that Hearing Voices Groups have provided benefits by helping participants to realise that they are not alone in their experiences. Informally evaluated outcomes included increased confidence and acceptance of voices, however formal evaluation of outcomes are required.

Two studies investigated the experience of hallucinations in professionals, with one study suggesting that professionals might have higher levels of hallucinatory experience than the general public. It has been suggested that this finding should be used to challenge the sense of ‘us and them’ and combat the social distance between professionals and those they care for.

Five intervention studies aimed to change professionals’ attitudes and responses by using voice simulation experiences, to allow professionals to gain a greater insight into the experience. These have demonstrated positive outcomes including increases in empathy, positive attitudes and intentions to help people who hear voices. This suggests a potentially useful training tool for clinical practice, but requires further investigation, given that some studies demonstrated increases in stigma, when it was used with the public.

Since there was a scarcity of literature, findings were mixed and there seemed to be ambivalence amongst staff, it would be important to investigate this area further. None of the studies applied any theoretical models to understanding attitudes and responses, so future research could include this in order to gain greater clarity. The majority of the studies were conducted with medical professionals or refer primarily to nurses. It would therefore be useful to include a wider variety of professionals including untrained staff, such as support workers who have been omitted from all the existing studies. An unanswered question within the literature is what factors influence the response to hallucinations and thus future research should address this. Given the prevalence of hallucinatory experiences and the high levels of distress often associated with these, which might be alleviated by professionals' attitudes and responses, it would seem a vital topic for further investigation.

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* Studies included in the review.

Appendix A.

Appendices

Search Strategy

Source	Date	Articles yielded	Of which excluded	Reason for exclusion	Articles Remaining
Web of science combined search using ‘hallucination*’ AND (‘professionals*’ or ‘staff’ or ‘carer*’) (topic)	18.03.2011	290	48	Not in English Language	242
			275	Irrelevant title or abstract	7
Psychinfo combined search using ‘hallucination*’ AND (‘professionals*’ or ‘staff’ or ‘carer*’) (key words)	23.05.2011	58	56	Irrelevant title or abstract	2
Psychinfo combined search using professional* (key concepts) or staff* (key concepts) or carer* (key concepts) AND psychosis (key concepts) or psychotic (key concepts) or schizophren* (key concepts)	10.05.2011	415	415	Irrelevant title or abstract	0
Web of science combined search using (‘professional*’ or ‘staff*’or ‘carer*’) AND (‘schizophren*’ or ‘psychosis’ or ‘psychotic’) (topic)	10.05.2011	4,105[a]	10%	Irrelevant title or abstract	0
Web of science ‘Simulat*’ (title) AND ‘hallucination*’ (topic)	10.05.2011	27	3	Not in English Language	24
			20	Irrelevant title or abstract	4
Psychinfo ‘Simulat*’ AND ‘hallucination*’ (key words)	10.05.2011	1	1	Irrelevant title or abstract	0
Psychinfo ‘Simulat*’ AND ‘voice*’ (key words)	10.05.2011	1	0	Irrelevant title or abstract	1
Previous search for a related study using ‘content*’ (abstract), ‘schizophrenia’ (all fields) AND ‘hallucinations’ (abstract)	23.10.2009	-	-	-	1
Reference list of the above remaining articles	10.05.2011	N/A	N/A	N/A	1
Total Number of articles included in review					16

[a] Refined by: Document Type=(ARTICLE OR REVIEW OR CLINICAL TRIAL OR ABSTRACT) AND Subject Areas=(PSYCHIATRY OR PSYCHOLOGY OR BEHAVIORAL SCIENCES OR SOCIAL SCIENCES - OTHER TOPICS OR HEALTH CARE SCIENCES & SERVICES OR ETHNIC STUDIES OR SOCIOLOGY OR FAMILY STUDIES OR SOCIAL ISSUES OR NURSING OR REHABILITATION OR INTEGRATIVE & COMPLEMENTARY MEDICINE OR RESEARCH & EXPERIMENTAL MEDICINE) AND Languages=(ENGLISH)

Appendix B. Method for appraising Qualitative Studies

Public Health Resource Unit (2006) Critical Appraisal Skills Program (CASP) 'Making sense of Evidence' tool was used. The only adaptation was to give a score of 0-2 for each of their 10 questions where 0 = failed to consider, 1 = partially considered and 2 = fully considered.

Appendix C. Method for appraising Quantitative Studies

This adapted Downs and Black (1998) appraisal tool. All questions were scored 1 = yes, 0 = no. All questions that were not applicable to a particular study scored 1. In addition, for question 11, studies scored 1 if a convenience sample was used. For question 18, studies scored 0 if there was no description of how results were obtained. For question 20, for a score of 1, reliability of questionnaires must have been given. Questions 5, 8 13, 14, 15, 17, 19, 21, 22, 23, 24, and 25 were not relevant and were therefore not included. The following questions were added:

- Have ethical issues been taken into consideration?

  Score 1 if study states where ethical approval was granted

- Does the research make a valuable contribution?
- Is the reporting effective and clear?
- Have they considered how their findings fit within the literature?
- Where questionnaires were used, is it clear what questions were asked?

  Score 1 if no questionnaires were used.

The remainder of the scoring system was the same as Downs and Black's (1998) appraisal tool.

Research Report

Abstract

Objectives: *Part 1*. To investigate pertinent issues when discussing the content of voices with people who hear voices. *Part 2*. To find out what predicts Intention to discuss the content and meaning of voices. **Design:** *Part 1*. Interview study with carers and health and social care staff. *Part 2*. A cross-sectional questionnaire study with carers and health and social care staff. **Methods:** *Part 1*. Interviews were conducted with 3 carers and 10 staff who care for people who hear voices. These were based upon a Theory of Planned Behaviour (TPB) framework and assessed 1) advantages/disadvantages; 2) barriers/facilitators; 3) those who approve/disapprove and 4) feelings when discussing the content of voices. The interviews were categorised into the most frequently occurring issues in relation to each of the four areas. *Part 2*: A TPB questionnaire was constructed based upon the categories identified from the interviews in part 1. This was completed by 142 carers and health and social care staff. **Results:** A hierarchical multiple regression analysis found the TPB was able to significantly predict Intention to discuss the content of voices. No other variables added significantly to the model of prediction. The final model accounted for 58.8 % of variance in Intention. **Conclusions:** The TPB is an effective model in predicting Intention to discuss the content of voices. Intervention studies targeting the issues highlighted could be used to increase Intentions to discuss the content of voices with people who hear voices.

Introduction

This study investigated issues influencing the Intention[3] of staff and carers to discuss the content and meaning of voices with people who hear voices. Attempts to define hearing voices have proven complex since there can be a variety of hallucinatory phenomena and it is difficult to distinguish between these and other normal or abnormal mental states (Bentall, 1990). Hallucinations are defined in The Diagnostic and Statistical Manual of Mental Disorders: Fourth Edition, (*DSM-IV;* American Psychiatric Association [APA], 1994) as "a sensory perception that has a compelling sense of reality of a true perception, but occurs without external stimulation of the relevant sensory organ." (p. 767, *DSM-IV*, 1994). Thus, an auditory hallucination is a false perception of sound. Hallucinations can be experienced though the full range of senses, however the focus of this study is upon auditory hallucinations, since these are the most frequent (*DSM-IV*, 1994). The existing literature does not have a specific definition for discussing the content and meaning of voices to the author's knowledge, therefore this study produced one. Discussing the content and meaning of voices is referring to either actively encouraging a conversation or continuing a conversation initiated by someone who hears voices, about things such as what the voices are saying, what the person thinks the relevance of this might be, links to their life and past or present events. For the full definition provided to participants, see Appendix I.

There is a scarcity of literature in the area of discussing the content of voices with people who hear voices. This lack of literature may be accounted for in part by the claim that "the prevailing [Biomedical] paradigm judges the content [of delusions and hallucinations] to be irrelevant" (p.1471 Read & Argyle, 1999). Traditionally professionals have been trained to reinforce reality when they are talking to clients and not attend to the voices (Coffey & Hewitt, 2008). It has even been suggested that "to

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[3] Variables in the study are indicated by the use of capital letters

pay too much attention to content might be professionally damaging” (Boyle, 1992). However, there have been challenges to this paradigm.

There is substantial empirical evidence to suggest that the content of hallucinations is personally meaningful. For example, the content often reflects abusive experiences (e.g. Hardy et al., 2005), and it may also be related to social rank, since voice content and experience can mirror a person's social sense of being powerless and controlled or criticised by others (Birchwood et al., 2004).

There is some evidence to suggest that many people who hear voices would like the opportunity to discuss the content and meaning of their voices. For example, Coffey and Hewitt (2008) interviewed Community Mental Health Nurses (CMHNs) and service-users about their response to voices. The service-users in this study reported wanting to talk about the content and meaning of their voices with their CMHNs. There was a discrepancy between perceptions of CMHNs and service-users. The CMHNs felt that they offered a considered, individually tailored response when their clients told them that they were hearing voices, whereas the clients felt it was predominantly limited to reviews of medication and arrangements to see the psychiatrist (Coffey & Hewitt, 2008).

In addition to evidence that people who hear voices want to discuss the content and meaning of these, the recent evidence base for CBT for psychosis suggests that doing so is beneficial (Dickerson, 2000). Although discussing the content and meaning of voices is not synonymous with CBT for psychosis, CBT techniques refer to the specific content of auditory hallucinations when seeking to modify appraisals of these. Aschebrock, Gavey, McCreanor, and Tippett (2003), however, argue that this intervention has tended to be more process-orientated than content-orientated.

Aschebrock et al. (2003) conducted a survey of 58 mental health practitioners’ and researchers’ views on discussing the content of delusions and hallucinations with clients. The responses demonstrated ambivalence. Participants identified some benefits (e.g. heightened understanding of clients' difficulties, enhanced therapeutic relationship, improved risk assessment) as well as some drawbacks (e.g. waste of time, exacerbation of clients' distress, reinforcement of content, blurred distinction between reality and non-reality) associated with attending to content. Half of the participants suggested that their work would be enhanced, while approximately one-fifth felt that their work would be affected adversely should they attend to the content of voices. As there were mixed views among the professionals in Aschebrock's (2003) sample, the present study is important in gaining more information on the factors that influence decisions to discuss the content and meaning of voices.

Theory of Planned Behaviour

One model that has been used to understand the factors influencing a person's decision to carry out a behaviour is the Theory of Planned Behaviour (TPB) (e.g. Ajzen, 1985). This model proposes that three constructs - Attitudes, Subjective Norms and Perceived Behavioural Control - predict Intentions and, in turn, behaviour. Attitudes are defined as a person's overall evaluation of the behaviour and are made up of two components that work together: beliefs about the consequences of the behaviour and the corresponding judgments about the importance of each of these consequences. Subjective norms are a person's own estimate of the social pressure to perform the target behaviour. This construct also has two interacting components: beliefs about how people considered to be important to the person would want them to behave, and their judgments about the importance of this to them. Perceived Behavioural Control is composed of two separate constructs: how much a person feels a behaviour is under their personal control (Control Belief) and how confident the person feels about being able to perform the behaviour (Self Efficacy) (Francis et al., 2004).

The three TPB constructs (Attitude, Subjective Norm and Perceived Behavioural Control) can be measured both directly and indirectly. The indirect constructs are known as Behavioural Beliefs, Normative Beliefs and Control Beliefs and correspond with the three aforementioned constructs respectively. A direct measure would use a questionnaire item worded in broad and general terms (e.g. People would approve of me if…). In addition, interviews can be used to identify the variables known as indirect variables, which are further specifications of each construct (e.g. *service-user* groups would approve). This study combined both approaches to measurement by using questionnaire items of direct TPB variables as well as items of indirect TPB variables gained from interviews.

A meta-analysis of 185 studies found that TPB accounted for a mean of 27% of variance in behaviour and 39% of variance in Intention, across a wide range of behaviours such as exercise, smoking-cessation, kidney donation, ecstasy use, investment decisions and training session attendance (Armitage & Conner, 2001). The TPB framework may help to clarify why staff and carers do or do not talk to people who hear voices about the content and meaning of their voices.

As TPB is only able to predict a proportion of Intention, there must be other factors influencing this important variable. Some researchers argue that Past Behaviour should be included in the predictive model (Beck & Ajzen, 1991), and recent developments in the TPB literature have also proposed the inclusion of fear and anticipated affect (e.g. Poliakoff & Webb, 2007) as additional predictors. This study therefore included measures of each of these constructs to see if this added any predictive power.

Furthermore, if, as stated earlier, “the prevailing [Biomedical] paradigm judges the content [of delusions and hallucinations] to be irrelevant,” (Read & Argyle, 1999) it could be reasonably hypothesised that those who adhere to a more biomedical paradigm will be less likely to attend to the idiosyncratic content and meaning of voices, and so a question was included to measure this. Different professionals are likely to endorse different theoretical orientations. For example, psychiatrists may be more likely to subscribe to a biomedical paradigm, while clinical psychologists or social workers may prefer a biopsychosocial approach. In addition, the specific content and emphasis of professional training differs significantly between disciplines and is therefore likely to have an effect on attitudes and behaviour. This study therefore also investigated whether professional Role (carer/psychiatrist/nurse etc) predicted the Intention to discuss the content and meaning of voices. In addition, individual teams may have their own particular culture or practice, and it may be that some teams would generally be more encouraging of discussing the content and meaning of voices than others. This study therefore investigated whether the Team someone belonged to could predict their level of Intentions to discuss the content of voices.

Aims and Hypotheses

Aims

(a) To use TPB to predict Intention to discuss the content and meaning of voices.

(b) To find out which of the issues highlighted in the interviews are most predictive of Intention

(c) To find out whether any other variables have a relationship with Intention and can add predictive power to the model. These include Role, Team, Fear, Training, Biomedical Orientation, Anticipated Affect and Past Behaviour.

Hypotheses

Intention refers to the Intention to discuss the content and meaning of voices but hereafter is shortened to Intention.

It is hypothesised

(i) That the direct variables of the TPB will significantly predict Intention

(ii) That the indirect variables of TPB will add predictive power to the model

(iii) That adhering to a more Biomedical Orientation will make someone have lower Intentions

(iv) That having previously discussed the content and meaning of voices will make someone more likely to intend to in the future

(v) That those who have received Training specifically in discussing the content of voices will be more likely to have Intentions, than those who have not received Training

(vi) That those with higher levels of Fear will have lower levels of Intentions than those with lower levels of Fear

(vii) That those who anticipate experiencing positive affect themselves when discussing the content and meaning of voices will have greater Intentions to do so than those with lower levels of Anticipated Affect.

Design

This study comprised two parts:

Part one was an interview study with a subset of staff and carers. These interviews were categorised in order to construct a questionnaire of the most frequently occurring concepts within the three TPB constructs of Attitude, Subjective Norm and Perceived Behavioural Control.

Part two was a cross-sectional study using the self-report questionnaire constructed from Part one with staff and carers. The questionnaire contained measures for the dependent variable of Intention and for the predictors: TPB variables (Attitude, Subjective Norm and Perceived Behavioural Control), Role, Team, Fear, Training, Biomedical Orientation, Anticipated Affect and Past Behaviour.

PART ONE

Method

Participants

Fourteen staff participants and six carer participants from Rethink volunteered for the interviews from which 13 were selected (see below). Of the team managers who received invitations for their staff to take part, four teams agreed and three teams declined due to being too busy.

A purposive sample of 10 health and social care staff was used to represent subsets of the population of health and social care staff. Interviewees were therefore selected in order to gain a variety of different professional Roles and different Teams. Participants were included from both ward-based and community-based teams as well as from an Early Intervention Service and a team supporting people with more enduring mental health difficulties. In addition, three carers of people who hear voices from Rethink (a voluntary organisation for service-users and carers of people with severe and enduring mental health difficulties) were interviewed. Of the 13 interviewees, seven were male and six were female. There was one psychiatrist, two nurses, one vocational worker, two social workers, two support workers, one occupational therapist, one psychologist and three carers.

Procedure

Staff

A letter was sent to team managers inviting their team to participate and giving information about the study (Appendix J). The letter was followed up with a telephone call, in most cases, unless a response had already been received. After gaining permission from the team manager, the researcher asked the team manager or administrator to email all team members with the Participant Information Sheet (Appendix H), a few days before their next team meeting. The researcher then visited the teams during their team meeting to discuss the study with staff face-to face. They were each given an information sheet (Appendix H). Staff were asked to complete a reply slip indicating whether they did or did not wish to take part (See Appendix H). They were asked to post these into a box at the end of the meeting. The researcher then approached those staff that agreed to take part to arrange a convenient time to conduct the interview. Some staff that were not present at the meeting but had received the email also volunteered.

Participants were given consent forms to sign (see Appendix G) before beginning the interview. The interviews were conducted in a quiet room on the work premises. The interviews were conducted according to an interview schedule adapted from Francis et al. (2004) (see Appendix I). This interview schedule was provided within Francis et al.'s (2004) manual, which provides information to assist researchers in constucting questionnaires based upon the TPB. Each interview lasted between 7 and 23 minutes.

Carers

The researcher attended the monthly carers meetings having obtained permission from the manager and interviews were conducted in a quiet room at the Rethink base. These interviews took somewhat longer - between 15 and 40 minutes. This may have been because carers had not already had the opportunity to talk about their experiences in the same way that staff had during their training and in supervision for instance. The remainder of the procedure was identical to the ‘Staff’ section above.

Pilot

Before conducting the interviews, one pilot interview was conducted with a carer. They suggested some minor alterations in the introduction to the interviews, which were incorporated. This was mainly concerned with helping interviewees to feel at ease. For example, it was suggested that a sentence should be added to the interview introduction to inform participants that it was ok to ask the researcher to repeat a question.

Analysis

A transcriber was employed to transcribe the interviews. A content analysis was conducted, in which the researcher read the transcripts and highlighted any concepts relating to the pre-agreed categories of the TPB interview schedule (Francis et al., 2004). These were all in reference to discussing the content of voices with someone who hears voices and consisted of the standard TPB topics:

1) The advantages
2) The disadvantages
3) Individuals/ Groups who would approve
4) Individuals/Groups who would disapprove
5) Factors/circumstances that enable them to do so

6) Factors/circumstances that would make it difficult to.

The first two topics aim to elicit the Behavioural Beliefs component of TPB, which is the indirect variable of Attitude. Topics 3 and 4 aim to elicit the Normative Beliefs component of TPB which is the indirect measure of Subjective Norm. Topics 5 and 6 aim to elicit the Control Beliefs component of TPB which is the indirect measure of Perceived Behavioural Control (see Introduction for details).

In addition, the categories of

7) Feelings
8) Reason for feelings

were included to investigate whether fear would be an issue, as this variable had been found to be predictive within more recent TPB studies.

Extracts relating to each of these concepts were cut out and placed under the appropriate categories. They were then further sub categorised within this so that similar concepts were placed together. Names were given to each sub-category that represented all the responses within that category, using the words of interviewees where possible. Each extract had a label to denote the interview it related to, so that it was possible to see how many interviewees had mentioned each category and sub-category.

Sub-categories mentioned by 25% or more interviewees (i.e. 4 or more interviewees) were included within the final questionnaire.

Inter-Rater Reliability

An independent researcher coded the interviews according to the above pre-agreed categories to ensure the validity of the coding. They read one carer transcript and one staff transcript (selected on the basis that they made reference to the largest number of individual categories). As this study had 13 interviews, this sample of two was just over

10%. The two coders then discussed their findings and reached an agreement over which category some extracts were most illustrative of. In addition, the second coder looked at each of the subcategories that the first coder had obtained and verified these.

Once categories and sub-categories had been agreed, a table of these was created (Appendix K). Both coders then recoded all 13 transcripts and decided whether or not each transcript had mentioned each of the subcategories. This was entered into the table (see Appendix K) with the corresponding line numbers to locate where the subcategory occurred in each transcript. It was then possible to compare the two coders' ratings to gain an inter-coder reliability figure. This statistic was obtained for each category by dividing the number of items that the coders agreed upon by the total number of items and multiplying by one hundred, according to standard TPB procedure.

Level of Reliability

The percentage agreement between the two coders was good: advantages (71.43 %), disadvantages (90.77%), approve (92.31 %), disapprove (84.62%), enable (84.62%), make difficult (86.67%), feelings (91.03%), and reason for feelings (80.77%).

Results

Advantages/Disadvantages – Behavioural Beliefs

Participants identified seven advantages. The two most frequently mentioned advantages were that discussing the content of the voices may inform/aid treatment and make a positive impact upon the person. Ten disadvantages were identified, with the most frequently mentioned being the risk of causing distress. Although this appears to contradict the advantage stated of having a positive impact upon the person, the perception portrayed by most was that distress was a short-term consequence whilst a positive impact was expected in the longer term. Although there were more individual disadvantages identified overall, disadvantages were only mentioned 27 times across the transcripts compared to 41 mentions of the advantages. Of the subcategories identified for advantages/disadvantages, 7 were mentioned by at least 25 % of participants and were therefore retained for inclusion within the subsequent questionnaire (Appendix F).

Approve/Disapprove – Normative Beliefs

There was a large overlap between people identified who may approve and those who may disapprove. For example, family and service-users were identified as groups who may both approve or disapprove, reflecting individual variation within these groups. Similarly, religious groups were placed in both categories by participants, and there seemed to be some particular ambiguity surrounding their views. Mental health professionals in general were seen to approve of discussing the content and meaning of voices, although the medical profession was deemed to disapprove by some respondents. Six individuals/groups were identified who may approve and five who may disapprove. The potential approval of others was mentioned 22 times compared to 18 mentions of those people thought to disapprove. Of the subcategories identified for approve/disapprove, 4 were mentioned by at least 25 % of participants and were therefore retained for inclusion within the subsequent questionnaire (Appendix F).

Enable/Make difficult – Control Beliefs

A large number of factors that may enable or conversely make it difficult to discuss voices were identified. Several of these were identified in pairs. For example, having a good relationship would enable discussion whilst lacking a good relationship would make it difficult. The importance of the service-users wishes was mentioned very frequently. Of the subcategories identified for enable/make difficult, 6 were mentioned by at least 25 % of participants and were therefore retained for inclusion within the subsequent questionnaire (Appendix F).

Affect

The question on affect elicited a number of emotions that the participants associated with discussing the content of voices, including fear or anxiety, which were raised by more than half the interviewees and was therefore included in the questionnaire. The main reason given for this anxiety was the reaction of the service-user, with some respondents expressing the worry that they may become violent. Distress/sadness/discomfort was also mentioned by more than half the interviewees and was therefore included within the questionnaire.

Discussion

Part one successfully fulfilled the aim of identifying the pertinent issues related to discussing the content of voices for inclusion within the questionnaire in Part two. Several of the issues identified as relevant were also found in Aschebrock et al.'s (2003) study. Both studies found that one perceived advantage is gaining a better understanding of the person, although this study also highlighted the additional benefit of service-users gaining greater understanding of themselves. Aschebrock et al.'s (2003) theme of 'facilitating appropriate decision-making regarding treatment intervention' is similar to that of 'gaining information to inform and aid treatment' in the present study. Aschebrock et al. (2003) found that people thought that discussing the content of voices would enhance the therapeutic relationship. Whilst this benefit arose in the present study, it was not mentioned by a sufficiently large number of participants to be included in the questionnaire. An additional benefit identified in this study was the potential to have a positive impact on the person who hears voices in the long term.

Both studies identified the potential to cause distress to the person who hears voices as a key disadvantage. This study also found that interviewees mentioned the distressing feelings of the person in the caring role when discussing the content of voices. This study found that - like Aschebrock et al.'s (2003) participants - some felt they might reinforce the hallucinations and delusions by discussing them, although again, this was not mentioned by enough interviewees to be included in the questionnaire. There was no evidence in this study of the remainder of the perceived drawbacks identified by Aschebrock et al. (2003) of being distracted from other more useful topics, or the possibility of clinicians themselves losing touch with reality.

One participant in Aschebrock et al. (2003) said they would suffer "ridicule from other professionals" (p.308) if they attended to the content of delusions and hallucinations. When participants of the present study were asked about those who may approve or disapprove, most felt that staff would approve in general, although some people identified that doctors and nurses may disapprove. One psychiatrist stated that believing the content of voices to be meaningful placed him "outside [the] medical mainstream" in a "sort of radical camp," which is similar to the view elicited in Aschebrock's (2003) study.

With regards to barriers or facilitators, both studies found that participants emphasised the client's wishes and the amount of time available. Aschebrock et al.'s (2003) participants discussed the potential of risk of self-harm or harm to others whilst participants in the current study implied this when they mentioned their Fear of the reaction of the person, including violence.

There was considerable overlap between the issues identified by this study and the Aschebrock et al. (2003) study, although there are some differences as highlighted above. This study was able to further our understanding by using the issues identified to predict Intention to discuss the content and meaning of voices and to elucidate the relative importance of these issues in Part two.

PART TWO

Introduction

The aim of Part two was to use a questionnaire with staff and carers to investigate predictors of Intention to discuss the content and meaning of voices with those they care for and to find out which of the issues highlighted in the interviews would predict Intention. It was hypothesized that the three constructs of the TPB (Attitude, Subjective Norm and Perceived Behavioural Control) would predict Intention. In addition, several other variables were included in order to assess whether these could add predictive power. These were Role, Biomedical Orientation, Team, Fear, Past Behaviour and Anticipated Affect. For more details, see the Aim and Hypotheses sections.

Method

Design

Part two was a cross-sectional study with health and social care staff and carers, using the self-report questionnaire constructed from Part 1. The questionnaire contained measures for the dependent variable of Intention and for the predictors: TPB variables, Role, Team, Fear, Training, Biomedical Orientation, Anticipated Affect and Past Behaviour.

Participants

All health and social care staff who worked with adults who hear voices within one NHS foundation trust, in a city in the north of England, were invited to participate. There were no exclusion criteria. Participants included staff from separate teams specialising in early intervention, severe and enduring mental health, assertive outreach, rehabilitation, respite, acute wards, intensive inpatient psychiatric care ward, crisis team and an inclusion team (working with people with service-users from BME communities)[4]. It was not possible to ascertain how many individuals declined to participate, as people were contacted by group email as well as in person. However, of those who were contacted face-to-face in a meeting, only six staff declined participation suggesting that this was a representative sample. Of the 20 team managers contacted, only three teams declined participation due to being too busy. It is possible that those three teams had more negative views towards discussing the content and meaning of voices and declined participation due to not prioritising this topic of research however, it was not possible to confirm this as they declined participation.

In addition carers from Rethink organisation were contacted. Twelve carers were contacted by visiting carers groups and 73 carers were posted a questionnaire. This included all carers that Rethink supported in one city, who cared for someone with a diagnosis of schizophrenia or psychosis and some with a diagnosis of bipolar affective disorder where the workers knew that the person was hearing/had heard voices. Ten questionnaires were returned giving a response rate of just 11.8 %. Of the 10 carer questionnaires, eight had sufficient data to be included. Questionnaires were excluded if they had missing data from more than one dependent variable question, more than two questions within one section, or more than three questions on the whole questionnaire. Twelve questionnaires were excluded on this basis, including the aforementioned carer questionnaires.

Table 1 presents the characteristics of the sample. Respondents had a mean age of 42 (range 20-72) with a mean of 13.2 years of experience of working with/caring for people who hear voices. The majority of respondents were White British (81.0%).

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[4] The team names have been changed to show speciality but ensure confidentiality is maintained

Seven participants (4.9%) chose not to specify their ethnicity. Nearly half of respondents (43.7%) were nurses followed by 14.8 % support workers, 13.4 % social workers and a small proportion of carers, psychiatrists, psychologists and occupational therapists. The teams dedicated to severe and enduring mental health and the rehabilitation teams had the most respondents. Only three respondents were from the respite and inclusion teams, although the latter was a very small team. The majority of participants (73.2%) had received training in discussing the content of voices (Table 2).

Table 1

Summary of Sample Characteristics for Part Two

Variable	N	Percentage
Gender		
Male	63	44.4 %
Female	77	54.2 %
Did not specify	2	1.4%
Total	142	
Role		
Carer	8	5.6 %
Psychiatrist	12	8.5 %
Psychologist	9	6.3 %
Nurse	62	43.7 %
Social Worker	19	13.4 %
Occupational Therapist	5	3.5 %
Support Worker	21	14.8 %
Other [a]	6	4.2 %
Team [b]		
Assertive Outreach	12	8.5%
Early Intervention	16	11.3%
Severe and Enduring Mental health	27	19.0%
Crisis Team	14	9.9%
Acute Wards	15	10.6%
Intensive Inpatient Psychiatric Care	7	4.9%
Inclusion Team	3	2.1%
Rehabilitation wards	26	18.3%
Respite	3	2.1%
Other	10	7.0%
Carer	8	5.6%
Ethnicity [c]		
White British	115	81.0%
White Irish	2	1.4%
White other	8	5.6%
Black African	2	1.4%
British Asian	1	0.7%
Asian	4	2.8%
Other	3	2.1%
Did not specify	7	4.9%
Variable	**M**	**SD**
Age	42 (range 20 – 72)	10.37
Experience (years) [d]	13.2 (0-35)	8.64

[a] These respondents identified themselves as one discharge co-ordinator, one music therapist, two employment and education workers, one ward manager and one trainee CBT therapist.

[b] The team names have been changed to show speciality but ensure confidentiality is maintained

[c] People chose a response to the open-ended question “What is your ethnicity?” with no pre-defined categories

[d] The minimum amount of experience was one month

Table 2.
Descriptive Statistics of Training Within Different Roles.

		Training			
		Yes		No	
		N	%	n	%
Role	Carer	0	0 %	8	100 %
	Psychiatrist	8	66.7 %	4	33.7 %
	Psychologist	8	100 %	0	0 %
	Nurse	49	79.0 %	13	21.0 %
	Social Worker	17	89.5 %	2	10.5 %
	Occupational Therapist	4	80.0 %	1	20.0 %
	Support Worker	13	61.9 %	8	38.1 %
	Other	5	83.3 %	1	16.7 %
	Total [a]	104	73.2 %	37	26.1 %

[a] The total percentage is not 100 % as one person did not specify

Recruitment

Staff

A letter was sent to each team manager (who had not already been contacted for part one) inviting them to participate and giving information about the study. In most cases the letter was followed up with a telephone call unless the manager had already responded. If the manager consented to be involved, the researcher visited the team during one of their meetings or handovers, to discuss the study directly with the staff. A few days before the meeting, the team manager or administrator was asked to email team members (Appendix L) with the link to the website where the information sheet (Appendix H) and questionnaire (Appendix F) could be found. The questionnaire was also taken to the meeting as a paper copy and handed to each staff member along with an information sheet. Staff then posted either their completed questionnaire or blank questionnaire (if they did not want to participate) in the box provided. The researcher then collected this box after the meeting. A reminder email was sent after a two-week interval.

Carers

The researcher visited the carers group and handed out the paper questionnaires. They decided that instead of completing the questionnaires in the meeting, they wanted to take them home, so they opted to post them back or leave them with the Rethink staff for the researcher to collect. Due to the low response rate after this, questionnaires were posted to other Rethink carers who had not attended the meeting. The remainder of the procedure was identical to the 'Staff' section above.

Materials

The questionnaire existed in two versions: online with Survey Monkey and in a paper format (Appendix F). An introduction asked the participant to confirm that they work with/ care for someone who hears voices and that they give their informed consent to take part. A brief section (seven questions) of demographic information followed. Questions asked about participants' gender, age, marital status, ethnicity and number of years working with people who hear voices, as well as the following demographics used as variables: Role, Team, and Training.

A definition of the concept of discussing the content of voices was given followed by some guidance on completing the questionnaire. The main TPB questions followed. The questions were taken from a standard example TPB questionnaire given in a manual for constructing TPB questionnaires (Francis et al., 2004). The categories mentioned by the most interviewees were inserted into the pre-designed questions (e.g. 'X would approve of me doing Y would become 'Service-users would approve of me discussing the content and meaning of voices with someone who hears voices.' (See

Analysis section in part one for details of how categories were chosen). A 7-point Likert Scale was given for responses varying from e.g. “Extremely unlikely” to “Extremely Likely.”

In addition, interspersed with the other questions were those measuring the other variables. These were questions asking about Biomedical Orientation, Anticipated Affect, Fear, and Past Behaviour. There were 58 questions in total excluding the demographic section. It took an average of 5-10 minutes to complete.

The questionnaire was piloted with four carers and four staff members using the above recruitment method. They suggested some minor alterations to the wording and layout, which were implemented where possible.

Ethics

Ethical approval for the study was sought from two different sources due to the two distinct participant groups. The University of Sheffield Ethics Committee granted ethical approval for the research with carers. The Sheffield NHS Ethics Committee granted ethical approval for the research with NHS staff (see approval letters in Appendix D and E).

Careful consideration was given to a range of ethical issues. The transcriber was given clear guidelines and was required to sign a declaration form that included an agreement to maintain confidentiality (Appendix M). The researcher also ensured that participant confidentiality was maintained at all times.

An email was sent to potential participants at least 24 hours and usually a week before visiting the team meeting. This allowed potential participants sufficient time to consider their decision about whether to take part, as well as allowing staff members who may not have been present at the meeting to participate online.

In order to ensure that the procedure was not coercive, everyone was asked to return the reply slips and questionnaires whether completed or blank so that those who chose to take part were not easily identifiable.

A protocol was in place in case someone became distressed or the researcher was concerned about any disclosures in relation to work conduct or risk. The limits of confidentiality were clearly outlined to participants prior to obtaining consent (see Appendix I). In the end, this protocol was not required. One carer did become a little upset during the interview but there were no significant concerns for their welfare.

Results

Variables

The dependent variable in all analyses was the Intention to discuss the content and meaning of voices with someone who hears voices, which will be referred to simply as 'Intention '. For more details of variables see Appendix O.

Scale Analysis

The questionnaire contained several variables obtained by gaining a mean of more than one question measuring the same construct, in order to make the variables continuous. Cronbach's alpha was calculated for all the variables where items were combined in order to assess the internal reliability of the combined items. These combined constructs were the dependent variable of Intention, the independent variables of the three Direct TPB constructs, the three indirect TPB constructs and two Fear items. The three items of Intention had acceptable internal reliability alpha coefficients ($\alpha = .772$) and therefore a mean of the three items was used for the dependent variable. All the indirect TPB constructs had acceptable internal reliability (Behavioural Beliefs: $\alpha = .819$; Normative Beliefs: $\alpha = .696$; Control Beliefs: $\alpha = .746$).

The internal reliability of the three direct TPB constructs of Attitude was satisfactory ($\alpha = .654$). The alpha coefficient for Subjective Norm was unacceptable ($\alpha =. 145$) and could not be improved sufficiently by deleting any items therefore a single item was chosen. In order to decide which of the three items to choose, Pearson product moment correlations were examined to see which correlated more highly with the dependent variable of Intention and with the corresponding indirect Subjective Norm construct (Indirect Subjective Norm Sum). Subjective Norm Direct Measure 3 correlated best with Intention (r= .476, p <. 001) and the indirect measure of Subjective Norm (Indirect Subjective Norm Sum), (r= .410, p <. 001) and was therefore used in subsequent analyses.

Perceived Behavioural Control had an unacceptable alpha coefficient ($\alpha =. 404$) however it had been expected that it might load onto two components according to TPB theory (see Introduction), which could account for this. A factor analysis was therefore conducted to test this. Indeed, a principal component analysis on the four items with orthogonal rotation (varimax) found two components with eigen values over Kaiser's criterion of 1. The items that clustered on the same components suggested that these represented the concepts of Self Efficacy and Perceived Control as expected. Table 3 shows the factor loadings after rotation, which were high for all the items (well above the criterion of 0.4). (Field, 2009)

Table 3.

Summary of Factor Analysis Results for the PBC Construct

Item	Rotated Factor Loadings	
	Self Efficacy	Perceived Control
For me to discuss the content of voices is Easy/Difficult	.871	-.058
I am confident that I can discuss the content of voices if I want to	.881	.023
Whether I discuss the content of voices is entirely up to me	-.071	.855
I have complete control over whether I discuss the content of voices with the person who hears voices	.036	.865
Eigen Values	1.54	1.48
% Of Variance	38.54	37.05

A mean was therefore computed for the items relating to Self Efficacy and Perceived Control respectively. Mean Self Efficacy correlated more highly with Intention (r = .482, p < .001) and the indirect measure of Perceived Behavioural Control (r = .205, p = .015) and had a satisfactory alpha coefficient of .694 and was therefore used in subsequent analyses.

The two Fear items had acceptable internal reliability alpha coefficients (α = .668) and therefore a mean of the two items was used for this variable.

The two Past Behaviour items could not be combined due to differences in measurement therefore Past Behaviour 1 was chosen as one of the independent variables because it was a dichotomous categorical variable and was therefore suitable for inclusion in an MRA.

Descriptive Statistics

All variables were measured on Likert Scales from 1-7 or combined means of several such items such that these were the minimum and maximum potential scores. Giving a score of 7 indicated maximum agreement with an item.

Mean Intentions to discuss voices were quite high (M = 5.77, SD = 1.07). Most people had high Self-Efficacy in relation to discussing the content and meaning of voices (M = 5.25, SD = 1.33) and thought others approved (Subjective Norm Direct Measure 3) of this behaviour (M = 5.60, SD = 1.35). Similarly the attitude mean (Mean Attitude Direct Measure) shows that quite positive attitudes were the norm (M = 5.79, SD = 0.79). People had moderate expectations of experiencing positive affect themselves (M = 4.61, SD = 1.20) when discussing the content and meaning of voices. There were low levels of endorsement of a Biomedical Orientation (M = 2.26, SD = 1.60). The mean level of Fear was low (M = 2.49, SD = 1.44) but not non-existent.

Assessing the relationship between study variables and intention to discuss content and meaning of voices

A Pearson product moment correlation matrix was computed to evaluate the relationship between each of the variables and Intention, to test Hypotheses (iii – vii) (see below). In addition it was used to ensure there was no multicollinearity between the independent variables. The results of the analysis, presented in Table 4 show highly significant correlations between Intention and all the direct TPB items. Although further analysis is required to test Hypothesis (i) that the direct measure of the TPB will significantly predict Intention, the correlations are suggestive that they will do. The independent variables (Mean Attitude Direct Measure, Mean Self Efficacy and Subjective Norm Direct Measure 3) had modest correlations with each other. They would be expected to correlate with each other but should not correlate too highly as this would be suggestive that they are measuring the same construct (Ajzen, 1985). These are all well below the cut off of .07 for multicollinearity and are therefore satisfactory.

Table 4.

Pearson Product Moment Correlations Between Mean Intention and the TPB Direct Variables

	1	2	3	4
1. Mean Intention	-	.521**	.482**	.476**
2. Mean Attitude Direct Measure		-	.466**	.332**
3. Mean Self Efficacy			-	.291**
4. Subjective Norm Direct Measure 3				-

* p < .05. ** p < .01.

Table 5 shows the relationship between Intention and the indirect TPB variables, all of which were significantly positively correlated with Intention as expected. Again, the independent variables (Sum of Indirect Attitude Items, Sum of Indirect Subjective Norm Items, Sum of Indirect Perceived Behavioural Control Items) had modest correlations with each other however these were all well below the cut off of .07 for multicollinearity and were therefore satisfactory.

Table 5.

Pearson Product Moment Correlation Between Mean Intention and the TPB Indirect Variables

	1	2	3	4
1. Mean Intention	-	.469**	.434**	.202*
2. Sum of Indirect Attitude Items		-	.427**	.178*
3. Sum of Indirect Subjective Norm Items			-	.287**
4. Sum of Indirect Perceived Behavioural Control Items				-

* p < .05. ** p < .01.

Table 6 shows the relationship between Intention and the additional variables. A Kendall's Tau correlation coefficient was conducted between Intention and Training since it is a categorical variable. Fear ($r= -.251$, $p < 0.01$), Mean Anticipated Affect ($r= .400$, $p< 0.01$), Past Behaviour ($r =. 200$, $p < 0.05$) and Training (Kendall's Tau $r = -.198^*$, $p < 0.05$), were significantly correlated with Intention confirming Hypotheses (iv - vi) however the latter two were modest in size. Previously discussing the content and meaning of voices made someone more likely to intend to in the future (Hypothesis iv). People who had greater Anticipated Affect (of experiencing feeling happy, comfortable and calm themselves when they discussed voices with someone) had greater Intentions to do so (Hypothesis vii). Those who had higher levels of Fear had slightly lower Intentions (Hypothesis vi). Those who had received Training had slightly higher levels of Intentions[5] (Hypothesis v); Biomedical Orientation was not correlated with Intention ($r = -.031$) thus disconfirming Hypothesis (iii) that those who adhered to a more Biomedical Orientation would be less likely to discuss the content and meaning of voices.

It is standard procedure to have a maximum number of variables entered into regression analyses ($N \div 10$, where N is the number of participants) in order to reduce the chances of a Type I error. Therefore as Biomedical Orientation did not significantly correlate with Intention, it was not entered into the regression analyses.

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[5] Higher scores on Training indicated less Training as 0 = Training, 1 = no Training

Table 6.

Pearson Product Moment Correlations Between Intention and all Remaining Continuous Variables

	1	2	3	4	5
1. Mean Intention	-	-.251**	-.031	.200*	.400**
2. Mean Fear		-	.215*	.111	-.432**
3.Biomedical Orientation			-	-.094	-.160
4. Past behaviour 1				-	.280**
5. Mean Anticipated Affect					-

* p < .05. ** p < .01.

Normality of Distribution

Skewness and kurtosis were assessed to ensure normal distributions of all the continuous study variables. Examination of the histograms and skewness and kurtosis statistics for all these variables revealed that Mean Intention, Subjective Norm Direct Measure 3, Mean Attitude Direct Measure and Attitude Indirect Sum were significantly negatively skewed and Mean Self Efficacy and Mean Fear were significantly positively skewed (See Appendix Q for figures). Since the study used a relatively large sample, it would be expected to give rise to small standard errors such that significant skewness and kurtosis values are produced by even small deviations from normality (Field, 2009). As regression analyses are reasonably robust to violation of this assumption, only one variable, Mean Fear, which was identified as very skewed from examination of the histograms, was transformed using $\sqrt{\chi}$ after which it was normally distributed.

Differences in Intention between participants of different roles and teams

Before conducting the regression analyses, one-way ANOVAs were conducted with Role and Team (independent variables) respectively in order to assess any differences between the groups in Intention (dependent variable). This was with the aim of finding out whether people from different Roles and Teams would have different levels of Intention and whether these could then be added to the regression model to add predictive power (Aim C).

For Role, participants identified themselves as a carer, psychiatrist, psychologist, nurse, social worker, occupational therapist, support worker, art therapist or other. For Team, participants could be part of the following Teams[6]: assertive outreach, early intervention, severe and enduring mental health, crisis, acute wards, Intensive Inpatient Psychiatric Care, inclusion, rehabilitation, respite or carer. For both Role and Team, Bonferroni adjustments were used due to the multiple comparisons and Hochberg's GT2 adjustments were used due to the unequal groups.

For the ANOVA with Role, Levene's test of homogeneity of variance was not satisfied (F (7, 134), p = .001) therefore the more robust Welch and Brown- Forsythe ANOVA tests were completed and these just failed to reach statistical significance ((F [7, 26.26] p =. 133 and F [7, 38.13], p= .053 respectively) such that it was not appropriate to proceed with post hoc analysis. Neither was Role included in the later regression analyses.

A one-way ANOVA showed that there was a significant effect of Team on Intention (F [10, 130]= 2.19, P = .023), at the .05 level. Levene's test was not significant (F (10, 130) = 2.15, p = .025), at the <.001 level. satisfying the assumption of homogeneity of variance. Post hoc tests revealed that there was a significant difference between carers

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[6] The team names have been changed to show speciality but ensure confidentiality is maintained

and Intensive Inpatient Psychiatric Care (IIPC)[7] staff (Hochberg's GT2: p =. 037; Bonferroni: p=. 039) with IIPC staff reporting greater Intentions to discuss voices than the carers. There were also significant differences between IIPC staff and Respite staff (Hochberg's GT2: p=. 027; Bonferroni: p = .028) again with IIPC reporting greater Intention. In order to reduce the number of predictors entered into the MRA (as outlined above), Team was recoded into Carer, IIPC and other. (There was no significant difference between Respite and the remaining Teams so they were combined for the purposes of this analysis). The one-way ANOVA was repeated to ensure the new categorisation remained significant. This revealed a significant effect of Team on Intention again, F (2,138) = 5.96, p = .003 with differences between all three of the new groups (see Appendix P). Again the IIPC staff had the highest Intentions, followed by other staff and then the carers, who had the lowest Intentions of the three groups.

Predicting Intention

A three step hierarchical multiple regression analysis was conducted with the variables entered in the following blocks:

1. **Direct TPB variables**: Mean Self Efficacy, Mean Attitude Direct Measure, Subjective Norm Direct Measure 3
2. **Indirect TPB variables**: Sum of Indirect Attitude Items, Sum of Indirect Subjective Norm Items, Sum of Indirect Perceived Behavioural Control Items
3. **Additional Variables:** Team Carer, Team Intensive Inpatient Psychiatric Care, Mean Fear, Training, Past Behaviour 1, Mean Anticipated Affect.

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[7] The name of this team has been changed to show speciality but ensure confidentiality is maintained

The direct measures of the three TPB constructs were entered first, followed by the indirect measures of these constructs in the second block and all other variables in the third block. Intention was the dependent variable. This enabled Hypotheses (i) and (ii) to be tested. These were that (i) the direct variables of the TPB will significantly predict Intention and (ii) that the indirect variables of TPB will add predictive power to the model. It also enabled fulfilment of the aim to find out whether any additional variables could add any predictive power (aim c).

All assumptions of regression analyses were met. Examination of the plot of the residuals and normal probability plot revealed that the assumption of homoescedasticity was met and normality of residuals was just met despite the skewness of some variables described earlier. The assumption that errors in the regression are independent was tested using the Durbin Watson test, which was satisfactory as values were very close to 2 (at 1.99) (Field, 2009). Casewise diagnostics found that one participant had scores 3 standard deviations from those expected. Examination of the raw data revealed that it was unreliable and thus it was deleted from subsequent analyses.

As Table 7 shows, at the first step of the hierarchical multiple regression analysis, all three direct TPB constructs were significant thus confirming Hypothesis (i) that the direct variables of the TPB will significantly predict Intention (F (3,126) = 46.90, $p < .001$). In the second step, the three variables entered in block 1 remained significant and Attitude Indirect Sum was also significant. The other two variables were not significant (Subjective Norm Indirect Sum and Perceived behavioural Control Indirect Sum).

Aim (c) was to find out whether any additional predictors could add predictive power to the model. As Table 7 shows, for block 3, none of the additional variables in the third step were significant or added predictive power to the model (F change (6,

117) = .778, p = .558). The significant predictors in the final model were Attitude Indirect Sum, Subjective Norm Direct Measure 3 and Mean Self Efficacy.

Table 7.

Summary of Hierarchical Linear Regression Analysis for Variables Predicting Intention

Variable	B	SE B	B
Block 1			
Mean Self Efficacy	.153	.059	.186 *
Subjective Norm Direct Measure 3	.393	.062	.433 **
Mean Attitude Direct Measure	.410	.097	.301 **
Block 2			
Mean Self Efficacy	.148	.057	.179 *
Subjective Norm Direct Measure 3	.355	.063	.391 **
Mean Attitude Direct Measure	.222	.108	.163 *
Attitude Indirect Sum	.007	.003	.180 *
Perceived Behavioural Control Indirect Sum	.001	.002	.049
Subjective Norm Indirect Sum	.006	.004	.112
Block 3			
Mean Self Efficacy	.163	.065	.197 *
Subjective Norm Direct Measure 3	.371	.067	.409 **
Mean Attitude Direct Measure	.215	.115	.158
Attitude Indirect Sum	.007	.003	.186 *
Perceived Behavioural Control Indirect Sum	.001	.002	.037
Subjective Norm Indirect Sum	.006	.004	.103
Team Carer	-.425	.318	-.088
Team Intensive Inpatient Psychiatric Care	.152	.329	.029
Mean Fear	.248	.187	.097
Training	-.112	.172	-.044
Past Behaviour 1	.387	.375	.075
Mean Anticipated Affect	.017	.075	.018

* p < .05. ** p < .01.

Model Summary

Table 8 shows that 52.8% of the variability in Intention was accounted for by the three direct TPB predictors. The result is highly significant [F (3, 126) = 46.91, p < . 001] thus confirming Hypothesis (i) that the TPB would significantly predict Intention. The addition of the indirect TPB constructs in block 2 was significant confirming Hypothesis (ii) (F change (3, 123) = 4.23, p < . 001) but the addition of the remaining variables in block 3 was not (F change (6, 117) = .778, p =.588). In the final model, the significant predictors were Mean Self Efficacy (t(117) = 2.51, p =.013), Subjective Norm Direct Measure 3 (t(117) = 5.58, p < . 001) and Sum of Indirect Attitude Items (t(117) = 2.50, p = .014). This constitutes the three components of TPB with the first two taken from the direct measures and the latter from the indirect measures. Overall the final model was able to predict 58.8% variance in Intention.

Table 8.

Model Summary

Model	R	R square	R square change	F Change	Sig. F Change
1	.726	.528	.528	46.91	< .001
2	.756	.572	.044	4.23	.007
3	.767	.588	.016	.778	.588

An a priori power analysis had been conducted for the hierarchical multiple regression analysis with alpha =.05, an effect size of f_2=.15, power = .8 and 12 predictors. G*Power showed that a sample size of 114 would be required. As this sample was larger than this, adequate power was achieved.

Assessing the individual contributions of the Indirect TPB items obtained from the interviews

Each of the three indirect TPB variables (Behavioural Beliefs, Normative Beliefs and Control Beliefs) was gained from a mean of several individual issues highlighted in the interviews (e.g. "I do not have enough time to discuss the content and meaning of voices"). See Appendix F for all items. Normative Beliefs had four items with four corresponding questions assessing the importance of these beliefs. Behavioural Beliefs had seven items with seven corresponding questions assessing the importance of the belief. Control Beliefs had six items with six corresponding questions assessing the importance of these beliefs. In order to assess the individual contribution of these indirect TPB issues a multiple regression analysis was conducted with each of the individual issues highlighted (For each participant, a score was obtained for each variable by multiplying the strength of the belief by the importance attributed to that belief as is standard TPB procedure. See Appendix O for details.)

Before conducting the analysis, skewness and kurtosis were assessed to ensure normality of distributions. Examination of the histograms and skewness and kurtosis statistics for all the variables revealed that Control Belief 4, Normative Beliefs 1 and Behavioural Beliefs 2, 4, 5 and 6 were significantly negatively skewed and Normative Belief 3 was significantly positively skewed (See Appendix R for figures). Since skewness is not too problematic in regression analyses (as described earlier) only those that were very skewed from examination of the histograms were log transformed using $\sqrt{(k-\chi)}$ (Behavioural Beliefs 2, 5 and 6) after which these variables were normally distributed.

All assumptions of regression analyses were met. Examination of the plot of the residuals and normal probability plot revealed that the assumption of homoescedasticity was met and normality of residuals was just met despite the skewness of some variables described. The assumption that errors in the regression are independent was tested using the Durbin Watson test, which was satisfactory as values were close to 2 (at 1.94) (Field, 2009). Casewise diagnostics found no participants had scores 3 standard deviations from those expected.

The multiple regression analysis was conducted with the individual indirect TPB items as independent variables (see above) and Intention as the dependent variable. These variables could significantly predict Intention, F (17,114) = 5.29, p < .001. Overall they accounted for 44.1 % of variance in Intention. The aim of this analysis was to find out which of the individual items was predictive of Intention (aim b). The analysis found that Normative Belief 2 was significantly predictive of Intention (t (114) = 2.36, p =.020). This was level of agreement with "Service-user groups would approve of me discussing the content and meaning of voices" multiplied by level of agreement with "The approval of service-user groups is important to me". Normative Belief 4 (approval of doctors and nurses) just failed to reach statistical significance. (t (114) = 2.36, p = .055) None of the other individual items were predictive of Intention (see Appendix S).

Discussion

Findings

In TPB studies, Intention is usually measured as a proxy for the behaviour itself. This is because it is generally easier to measure, and Intention accounts for a large proportion of variation in behaviour (e.g. Armitage & Conner, 2001). When Intention to discuss the content and meaning of voices is discussed here, it can be interpreted in terms of its influence on subsequent behaviour. It is shortened simply to 'Intention'.

The mean Intention to discuss voices was quite high at 5.77 where scores could range from 1-7. This is similar to Aschebrock et al.'s (2003) finding that the majority of their 58 mental health professionals attended to the content of hallucinations. This was in spite of ambivalence in attitudes towards the value of doing so. Half of their participants suggested that their work would be enhanced, whilst approximately one-fifth felt that their work would be affected adversely, should they attend to the content of hallucinations. This could be compared to the attitude component of this study. Whilst the questions this study asked were different, the findings seem to suggest that the participants in this study had more positive attitudes than those in Aschebrock et al.'s (2008) study as the mean score for attitude in the present study was 5.79 where scores could range from 1-7 with 7 being the most positive attitude. Standard deviations were small (SD = 0.79). Aschebrock et al. (2003) recruited participants from a wide range of countries and this could perhaps have accounted for the greater range of responses, since cultural differences in attitudes and responses to hallucinations have been found (Wahass& Kent, 1997). This study furthered our understanding by not only looking at the issues surrounding the topic (as in Aschebrock et al., 2003) but also assessing which of these were predictive of intention.

The TPB was able to significantly predict Intention (Hypothesis i). In the final model, the significant predictors were Mean Self Efficacy, Subjective Norm Direct Measure 3 and Sum of Indirect Attitude Items. These correspond to the three core TPB constructs, with the first two taken from the direct measures and the latter from the indirect measure. (See Introduction section for explanation of direct vs. indirect variables). The regression model was highly significant and accounted for 58.8% of the variability in Intention, which is higher than the mean variance accounted for in other TPB studies, although the significance may have been slightly inflated by skewed variables. A meta-analysis of 185 studies found that TPB typically accounted for 39% of variance in Intention (Armitage & Conner, 2001). Not all studies use the indirect measures gained from interviews, which may have improved the validity of the present questionnaire and thus the predictive power of the current model. Indeed, in the final model, as described, it was the indirect measures of attitudes (those elicited during interviews) rather than the generic items of the direct measures that were statistically significant in the model. It may therefore be concluded that the indirect variables of TPB did add predictive power to the model (Hypothesis ii). No other studies to date have investigated the predictors of discussing the content and meaning of voices.

An ANOVA revealed that contrary to expectations, there was no difference between those of different Roles in their level of Intention to discuss the content and meaning of voices. It had been expected that medical staff, for example, would subscribe more strongly to a Biomedical Orientation and would therefore report lower Intentions to discuss voices than those who subscribed less strongly to this model, as the content of voices may be viewed as less significant if voices are construed merely as the symptom of a biological disease process. In the interviews of Part one, some professionals shared this view, reporting fears that medical staff might disapprove of them discussing the content and meaning of voices. However the medical staff did not report lower Intentions than other staff, nor was Biomedical Orientation correlated with Intention or predictive of it, disconfirming Hypothesis (iii).

ANOVA revealed that staff on the Intensive Inpatient Psychiatric Care ward (IIPC)[8] were significantly more likely to express Intentions to discuss voices than carers and staff from other Teams. This may be because whilst someone is actively psychotic (as many on the IIPC ward are), then it is much clearer that someone is currently hearing voices, such that staff might consider it timely to discuss the content of these. In addition, perhaps the service-users themselves are more likely to initiate a conversation about their voices at this time due to them being a very current concern. Also, the fear

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[8] The name of this team has been changed to show speciality but ensure confidentiality is maintained.

of causing short-term distress was an issue highlighted in the interviews as a barrier to discussing the content and meaning of voices. Perhaps staff working in IIPC are less concerned with causing short-term distress, since these service-users are already in a highly distressed state and so they would not be upsetting someone within a stable phase. Carers had the lowest Intentions of all the groups. Expecting to get a negative reaction from the person was an issue highlighted within the interviews. Since carers cannot leave their caring role at work, their role is therefore more permanent and global, such that they may be more fearful than staff about provoking a negative reaction in the person they care for.

Coffey et al.'s (2008) qualitative study indicated that several participants felt they lacked the confidence and training necessary for discussing the content and meaning of voices. For example, one participant described 'I don't feel…in a position to have enough weapons in my armoury to be able to support them when the wheel comes off sort of thing, you know?' (p.1597, Coffey et al., 2008). The majority of the present study participants indicated that they had received some specific training in relation to discussing the content and meaning of voices, with only 26.1% indicating that they had had none. This compares to 38% in Aschebrock et al.'s (2003) study. This may be because their category included 'Little or no training' as opposed to the 'No Training' category in this study. Alternatively, it could reflect a difference in the samples, perhaps due to the eight years that separate them and the corresponding advances in theory, practice and clinical guidance. Support workers felt they had received the least training as a staff group, with 61.9% of them reporting that they had received specific training in discussing voices while clinical psychologists felt they had received the most, with 100% of them reporting that they had received training. See Table 2. Receiving training was highly correlated with Intentions but it was not able to predict them (Hypothesis v).

Recent developments in the TPB have led to suggestions that Fear, Anticipated Affect and Past Behaviour should be added to the model. However none of these variables were able to predict Intention.

A Multiple regression analysis was conducted to find out which of the issues highlighted in the interviews were most predictive of Intention (Aim B). This used each of the individual items identified during interviews before they were combined into the three Indirect TPB components. The model was highly significant. There was one significant individual predictor: Level of agreement with "Service-user groups would approve of me discussing the content and meaning of voices." The wishes of individual service-users were also important considerations for the interview participants of Part one of this study and for the participants in Aschebrock et al.'s (2003) study.

Strengths and Limitations

Subjective Norm items had poor internal reliability, such that it was necessary to use a single item to measure this construct. However, difficulties with this component are common within TPB studies (Armitage & Conner, 2001). Despite this limitation with the Subjective Norm items, the model and the Subjective Norm construct itself (using the single item) were still predictive of Intention.

As described in the 'Results' section there were some issues with variables being skewed and not all of these were log transformed to prevent too many alterations to the data. This may have slightly inflated the chances of significant results however it should not bring into question the reliability of the model, since regression analyses are fairly robust against violations of the normality assumption and examination of the plots of the residuals showed a normal distribution.

The response rate from the carers was lower than expected. This may be due to key differences in recruitment method between the professionals and carer groups. Whereas staff were primarily recruited face-to-face by meeting with the researcher, most of the carers had no direct personal contact with the researcher, and were instead approached by post, due to practical constraints and the Rethink managers preference. However, the response rate from the carers in this study was low even when compared to other postal surveys (Kongsved, Basnov, Holm-Christensen & Hjollund, 2007). Perhaps this is due to the demanding nature of the caring role, meaning that the carers may not have managed to find the time to complete the questionnaire or may not have regarded it as a priority. In addition, two of the carers unfortunately had to be excluded from the analysis due to having submitted incomplete questionnaires.

One limitation of all TPB studies is that they are unable to determine causality due to their design. Another generic limitation of all TPB studies is that they are based upon self-report measures, and as such, the results may be subject to biases like the acquiescence bias in which respondents have a tendency to agree with items, for example. Participants' attitudes and their reported Intention were negatively skewed as most people endorsed positive attitudes towards this behaviour and reported that they intended to discuss the voices with the person who hears them. This may be because people view it as an integral part of their role. However, it is possible that some bias was introduced due to the context and the wording of the definition of Intention given to participants at the outset. For example, for clarity of expression most of the questions were worded positively (e.g. "Staff **would** approve…"). Participants were aware that the researcher was a psychologist and may therefore have inferred that the researcher would have positive attitudes towards discussing voices and the introduction uses the phrase "content and **meaning** of voices." Participants may have inferred that the researcher believes that voices are meaningful, such that an acquiescence bias may have occurred, where participants may have stated that they had more positive Intentions to discuss the content and meaning of voices than they actually did, in order to satisfy the researcher.

This study was the first to apply a model to the understanding of staff attitudes and responses to hallucinations. The chosen model of the TPB is a well-researched, effective model that has been reliably applied to a wide-range of behaviours (Armitage & Conner, 2001). Many TPB studies do not attempt to elicit the specific pertinent issues but use only the direct TPB variables instead as this is less time consuming. The use of interviews in this study to elicit the specific issues that were pertinent for this topic strengthened the validity of the findings and may have helped contribute to the large amount of variance in Intention accounted for by the independent variables, when compared to other TPB studies.

The study had a relatively large sample size when compared to other studies in this area and thus achieved good statistical power. It included carers and a range of professionals within varied services such that a representative sample of health and social care staff was achieved.

Theoretical Implications

This is the first time that the TPB has been applied to discussing the content and meaning of voices, and this study found that the TPB was able to predict this particular Intention, thus extending the scope of the TPB literature.

In a TPB meta-analysis, the Subjective Norm construct was found to be a weak predictor of Intention, which the authors suggest highlights the need for expansion of this component. This study supports that finding due to the difficulties it found with the internal reliability of the construct. The wording of the items that were chosen were commonly used TPB items however this study suggests that such items (i.e. ‘People who are important to me think I should…' and 'There is social pressure for me to…') should be used with caution.

Several authors propose the inclusion of other constructs to strengthen the model. Recent developments have led to the inclusion of Past Behaviour, Fear and Anticipated Affect, which were therefore included within this study. Despite significant correlations with Intention, these were not able to add significant predictive power to the hierarchical MRA model, adding weight to the converse argument that they should not be included in the TPB model.

Clinical Implications

The information gained in this study enables suggestions to be made regarding the potential avenues for intervention. It is possible to base interventions upon the TPB (Hardemen et al., 2002), and so one implication of these findings is that an intervention to target the factors that are predictive of Intention, has the potential to change people's Intentions and thus their behaviour, in relation to the extent to which they discuss the content and meaning of voices with people. Since there is evidence that many service-users would like to discuss the content and meaning of their voices (e.g. Coffey & Hewitt, 2008) and that this is often beneficial (e.g. Dickerson, 2000), then an intervention targeting Intention to do so, seems potentially useful.

Self-Efficacy was an important predictor of Intentions accounting for 16.3 percent variance in Intention. The more highly someone agreed with "For me, to discuss the content and meaning of voices is Easy" and "I am confident that I can discuss the content and meaning of voices" then the more likely they were to do so. This suggests the importance of training in increasing confidence in this area. Although Training was not predictive of Intention, it was highly correlated with it suggesting an important relationship.

The two most influential Normative Beliefs were the strength of agreement with "Service-users would approve of me discussing the content and meaning of voices" and "Doctors and nurses would approve of me discussing the content and meaning of voices." The former was statistically significant but the latter did not quite reach significance. It might be useful to inform people of the small but growing literature regarding service-users wishes to discuss the content and meaning of voices in case any assumptions have been made regarding this. Similarly, in the interviews, some expressed their perception that the medical profession might disapprove of them discussing the content and meaning of voices with someone. However, this was not borne out in Part two of the study as the ANOVAs found no differences in Intention between people of different professional Roles. This suggests that peoples' perceptions of the medical staff are different to the medical staff's actual Intentions. Again, education regarding this could be useful as the approval of others (Subjective Norm) was predictive of Intention.

Further research

Given the scarcity of literature within this important area, further research should be conducted. If this questionnaire is used in future studies, it needs to be adapted with new Subjective Norm items in order to improve the internal-reliability. The need for improvement of the Subjective Norm construct more broadly is supported by Armitage & Connor (2001). Other researchers have suggested the expansion of the TPB model to include Anticipated Affect, Fear and Past Behaviour (e.g. Beck & Ajzen, 1991; Poliakoff & Webb, 2007) however these were not predictive in this study, thus further research into the predictive validity of these components is required before they are incorporated into the TPB model.

Due to the small number of carer respondents, the observation that they reported lower Intentions to discuss voices than others, and the lack of any other related studies including carers, it would be useful to conduct more research with them in particular. Coffey et al.'s (2008) study is a reminder of the importance of gaining multiple perspectives since they found a contradiction between the perceptions of service-users and nurses of the care that those nurses were offering in response to hallucinations. Studies should therefore continue to gain service-user perspectives on the topic.

There is some evidence indicating that discussing the content and meaning of voices may be worthwhile such as the recent evidence base for CBT for psychosis (Dickerson, 2000). Although discussing the content and meaning of voices is not synonymous with CBT for psychosis, CBT techniques refer to the specific content of auditory hallucinations when seeking to modify appraisals of these. There have been no studies specifically assessing the effect of discussing the content and meaning of voices, except within a CBT framework. Given participant's fears that doing so could cause distress, it would be important to assess the impact.

If research continues to indicate that discussing the content and meaning of voices is beneficial (e.g. Dickerson, 2000; Coffey et al., 2008), it would be worthwhile investigating whether intervention studies in which specific components of the TPB are manipulated are effective in changing Intentions to discuss the content and meaning of voices. The Intention items of the present study could be used pre and post-intervention to assess change. Similarly, specific variables measured by the questionnaire could be targeted and used to assess change, such as attitudes.

Conclusion

The TPB was able to predict Intention to discuss the content and meaning of voices with people who hear voices. The indirect TPB variables obtained from interviews added significantly to the predictive power of the model however no other variables added significantly to the model. The final model consisted of the items that measured Attitude, Subjective Norm and Self-Efficacy. It may be possible to target interventions at these TPB variables in order to increase Intentions to discuss the content and meaning of voices. Of those indirect TPB variables obtained from interviews, the approval of service-user groups was the most important predictor of Intention to discuss the content and meaning of voices. The mean level of Intentions to discuss voices was quite high, although carers had significantly lower Intentions as a group. The numbers of carers in this study were quite low, however, and further research is required to replicate this finding.

Given the relatively high prevalence of hallucinatory experiences and the high levels of distress often associated with these, which might be alleviated by professionals and carers' attitudes and responses, it would seem a vital topic for further investigation.

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v) Formats

Appendix A. Letter of approval for specified journals

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Appendix B. Guidelines for submission to Clinical Psychology Review

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Appendix C. Guidelines for submission to the British Journal of Clinical Psychology

This has been removed for copyright purposes as it has third party information.

vi) Ethical Approvals

Appendix D. Ethical Approval Email from Department of Psychology Ethics Subcommittee

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Appendix E. Ethical approval letter from the NHS Sheffield Ethics Committee

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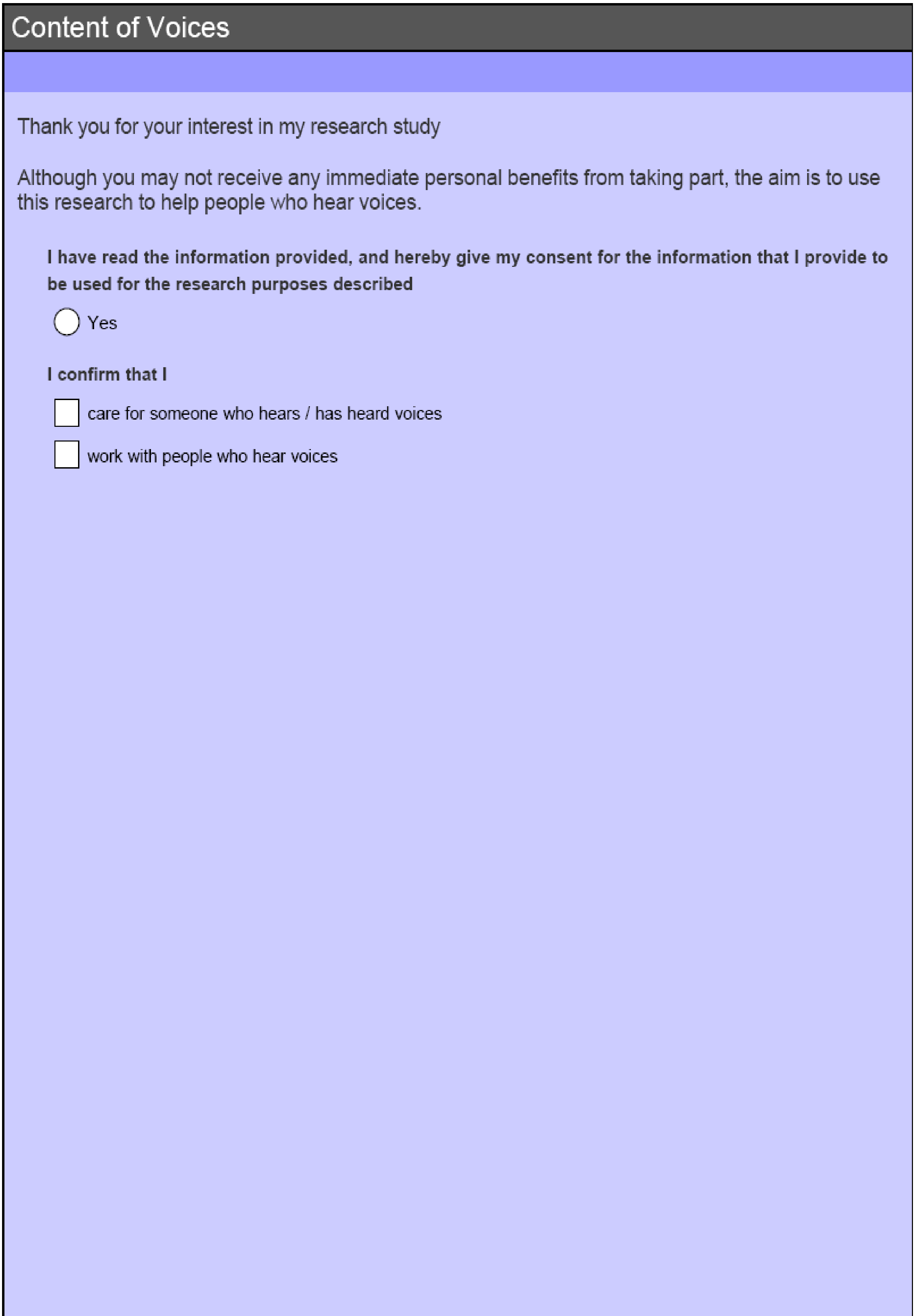
vii) Information Sheets, Consent Forms, Measures and Materials

Appendix F. Questionnaire



Content of Voices

Thank you for your interest in my research study

Although you may not receive any immediate personal benefits from taking part, the aim is to use this research to help people who hear voices.

I have read the information provided, and hereby give my consent for the information that I provide to be used for the research purposes described

○ Yes

I confirm that I

☐ care for someone who hears / has heard voices

☐ work with people who hear voices

Content of Voices

About your BACKGROUND

This information will be treated confidentially and will not be used to identify individuals. The researchers will be looking at responses of many people added together. Care will be taken so that individuals cannot be identified from details in study reports.

In total, how long have you

	Years	Months
cared for someone who hears/has heard voices		
worked with people who hear voices		

I am

○ Male

○ Female

What is your ethnicity?

How old are you?

	Years
.	

What is your role?
(If you are a student please tick the box of the profession you are training in)

☐ Carer

☐ Psychiatrist

☐ Psychologist

☐ Nurse

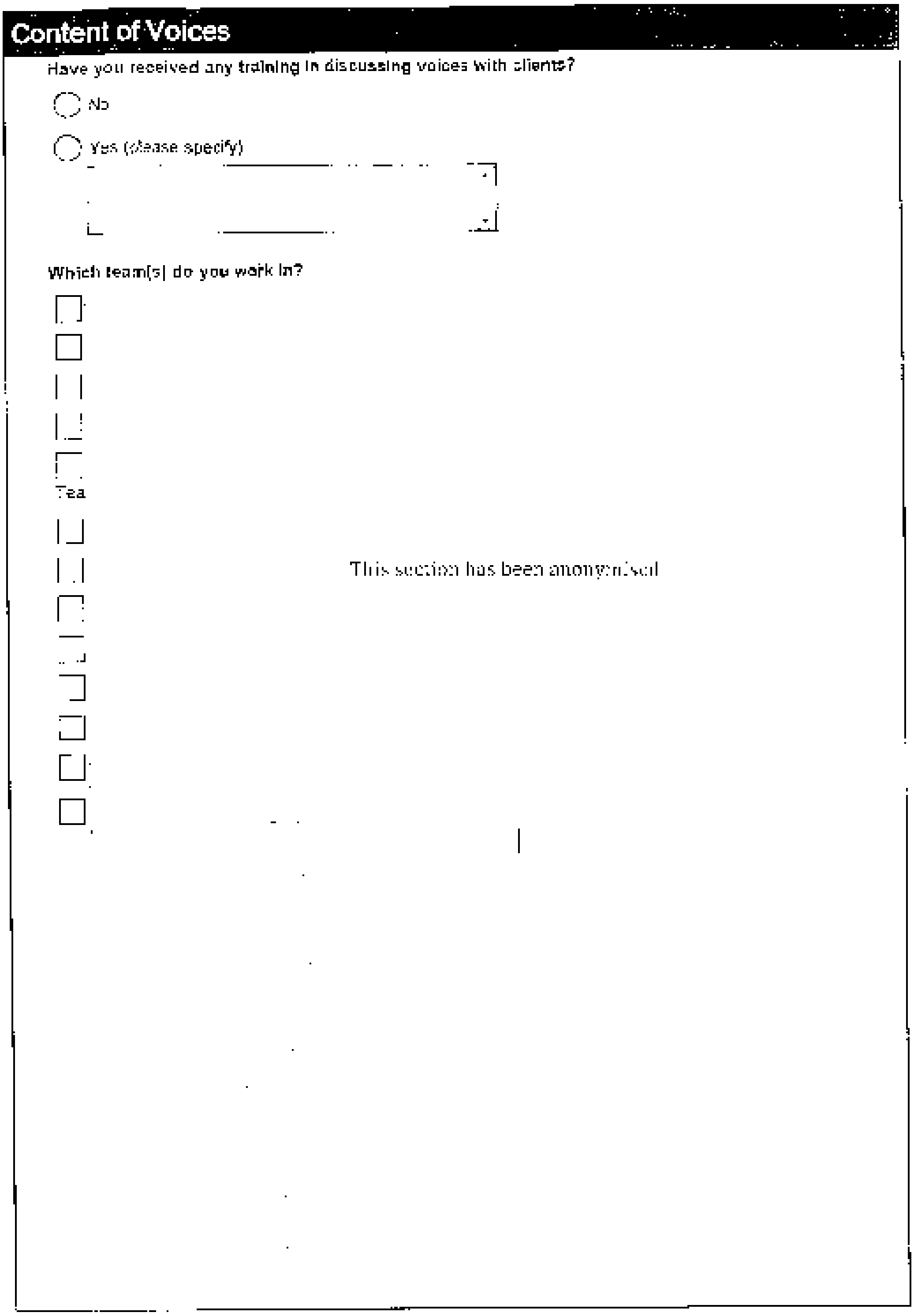
☐ Social Worker

☐ Occupational Therapist

☐ Support Worker

☐ Art Therapist

☐ Other



Content of Voices

Have you received any training in discussing voices with clients?

○ No

○ Yes (please specify)

Which team(s) do you work in?

☐
☐
☐
☐
☐
Tea
☐
☐
☐
☐
☐
☐
☐
☐

This section has been anonymised

Content of Voices

Important Guidance

When you think of people who hear voices for this questionnaire, it is referring to service-users you come into contact with or someone you care for who experiences auditory hallucinations. It does not matter for this questionnaire which diagnosis they have. For example they could have schizophrenia, drug induced psychosis, Bipolar Disorder, another diagnosis or no diagnosis.

DISCUSSING THE CONTENT AND MEANING OF VOICES IS REFERRING TO EITHER ACTIVELY ENCOURAGING A CONVERSATION OR CONTINUING A CONVERSATION INITIATED BY SOMEONE WHO HEARS VOICES, ABOUT THINGS SUCH AS WHAT THE VOICES ARE SAYING, WHAT THE PERSON THINKS THE RELEVANCE OF THIS MIGHT BE, LINKS TO THEIR LIFE AND PAST OR PRESENT EVENTS.

This might occur for staff during a home visit, as part of a formal consultation or informally, for example when talking to a client in the smoking area. Similarly, it may occur in a variety of situations for carers. It could last for just a few minutes or much longer.
To make things easier, all the above will be condensed into the following phrase: “Discussing the content of voices with someone who hears voices.”

Sometimes we will ask similar questions in slightly different ways. Although it may seem repetitive to you at times, this is important for the research. Thank you for your patience with this.

There are no right or wrong answers. It is your individual opinions and experiences we are interested in. Don't take too long thinking about each reply - your immediate reaction to each item will be more accurate than a long thought-out response

Each question refers to discussing the content of voices with someone who hears voices.

Content of Voices

The following questions are about the possible consequences of discussing the content of voices.

Please tick any one of the 7 boxes on each line showing the strength of your opinion.

Discussing the content of voices with someone who hears voices would...

	Extremely Unlikely						Extremely Likely
- be a good idea because there will be follow-on support available e.g psychology input:	○	○	○	○	○	○	○
- gain information to help inform and aid the person's treatment:	○	○	○	○	○	○	○
- cause short-term distress to the person:	○	○	○	○	○	○	○
- have a positive impact in the long run:	○	○	○	○	○	○	○
- give me a better understanding of the person:	○	○	○	○	○	○	○
- help them gain a better understanding of their experience:	○	○	○	○	○	○	○
- get a negative reaction from the person:	○	○	○	○	○	○	○

Content of Voices

.

	Extremely Undesirable						Extremely Desirable
- Having adequate follow-on support available for the person is:	○	○	○	○	○	○	○
- Gaining information to inform and aid the treatment of the person is:	○	○	○	○	○	○	○
- Causing short-term distress to the person is:	○	○	○	○	○	○	○
- Having a positive impact on the person in the long run is:	○	○	○	○	○	○	○
- Gaining a better understanding of the person is:	○	○	○	○	○	○	○
- Helping the person to gain a better understanding of their experience is:	○	○	○	○	○	○	○
- Getting a negative reaction from the person who hears voices is:	○	○	○	○	○	○	○

Content of Voices

The following section is about what others think you should do

	Strongly Disagree						Strongly Agree
- Staff would approve of me discussing the content of voices:	○	○	○	○	○	○	○
- Service-user groups would approve of me discussing the content of voices:	○	○	○	○	○	○	○
- Religious groups/other cultures would approve of me discussing the content of voices:	○	○	○	○	○	○	○
- Doctors and nurses would approve of me discussing the content of voices:	○	○	○	○	○	○	○

The following section is about how important different people's opinions are to you

.

	Not at all						Extremely
- The approval of staff is important to me:	○	○	○	○	○	○	○
- The approval of service-user groups is important to me:	○	○	○	○	○	○	○
- The approval of religious/cultural groups is important to me:	○	○	○	○	○	○	○
- The approval of the medical profession is important to me:	○	○	○	○	○	○	○

Content of Voices

The following section is about factors that may make it easier or more difficult to discuss the content of voices.

I am Less likely/More Likely to discuss the content of voices

	Less likely						More likely
- if it is in the right environment (e.g time and place):	○	○	○	○	○	○	○
- if I have a good relationship with the person:	○	○	○	○	○	○	○
- if the person wants to:	○	○	○	○	○	○	○
- if I take the right approach:	○	○	○	○	○	○	○
- if there is a lack of privacy:	○	○	○	○	○	○	○
- if I do not have enough time:	○	○	○	○	○	○	○

Content of Voices

To what extent do you think these factors are likely to occur?

.

	Extremely Unlikely						Extremely Likely
- I have the right environment (e.g. time and place) to discuss the content of voices:	○	○	○	○	○	○	○
- I have a good enough relationship with the person to discuss the content of their voices with then:	○	○	○	○	○	○	○
- The person would want to discuss the content of their voices with me:	○	○	○	○	○	○	○
- I take the right approach when discussing the content of voices:	○	○	○	○	○	○	○
- There is a lack of privacy to discuss the content of voices:	○	○	○	○	○	○	○
- I do not have enough time to discuss the content of voices:	○	○	○	○	○	○	○

Content of Voices

Overall I think that discussing the content of voices is:

	Harmful						Beneficial
.	○	○	○	○	○	○	○

.

	Pleasant (for me)						Unpleasant (for me)
.	○	○	○	○	○	○	○

.

	The wrong thing to do						The right thing to do
.	○	○	○	○	○	○	○

.

	Good						Bad
.	○	○	○	○	○	○	○

.

For me, to discuss the content of voices is

	Easy						Difficult
.	○	○	○	○	○	○	○

Content of Voices

This section contains some final questions about your views on the topic of discussing the content of voices with someone who hears voices.

	Strongly disagree						Strongly agree
- People who are important to me think that I should discuss the content of voices:	○	○	○	○	○	○	○
- I expect to discuss the content of voices:	○	○	○	○	○	○	○
- I feel under social pressure to discuss the content of voices:	○	○	○	○	○	○	○
- I am confident that I can discuss the content of voices if I want to:	○	○	○	○	○	○	○
- Whether I discuss the content of voices is entirely up to me:	○	○	○	○	○	○	○
- It is likely that I will discuss the content of voices with the person who hears voices:	○	○	○	○	○	○	○
- People would approve of me discussing the content of voices with the person who hears voices:	○	○	○	○	○	○	○
- I intend to discuss the content of voices with the person who hears voices:	○	○	○	○	○	○	○
- I have complete control over whether or not I discuss the content of voices with the person who hears voices:	○	○	○	○	○	○	○

Content of Voices

I believe in a biomedical approach (a way of explaining symptoms that focuses on biological factors such as genetics or brain chemistry but does not include social or psychological factors such as life experiences)

	Strongly disagree						Strongly agree
.	○	○	○	○	○	○	○

I would fear the reaction of the person who hears voices if I discussed the content of their voices with them

	Strongly disagree						Strongly agree
.	○	○	○	○	○	○	○

In the last 12 months I have discussed the content of voices with someone who hears voices

	Yes	No
.	○	○

In the past I have discussed the content of voices

	Not at all						A great deal
.	○	○	○	○	○	○	○

I would be anxious about the person becoming violent if I discussed the content of voices with them

	Strongly Disagree						Strongly Agree
.	○	○	○	○	○	○	○

I currently discuss the content of voices with someone who hears voices

	yes	no
.	○	○

At the moment I discuss the content of voices

	Not atall						A great deal
.	○	○	○	○	○	○	○

If I discuss the content of voices I will feel

	Sad						Happy
.	○	○	○	○	○	○	○

.

	Uncomfortable						Comfortable
.	○	○	○	○	○	○	○

.

	Distressed						Calm
.	○	○	○	○	○	○	○

End of Questionnaire

Please click 'Done' to submit your answers (or hand it in if completing a paper version).

THANK YOU FOR YOUR PARTICIPATION. IT IS GREATLY APPRECIATED.

If you would like to receive a summary of the results, please contact the researcher: Diana Macleod, pcp08dcm@shef.ac.uk.

Comments - (If you wish to make any comments about this questionnaire, please write them below)

Appendix G. Consent Form

CONSENT FORM

Title of Project: Discussing content of voices with people who hear voices

Name of Researcher: Diana Macleod **Please initial each box**

I confirm that I have read and understand the information sheet dated 10th August 2010, Version 3. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily. ☐

I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, without my medical care or legal rights being affected. ☐

I consent to audio tapes being made of the interview and to these tapes being used to aid this study . I consent to the excerpts from these recordings, or descriptions of them, being used by the researchers for the purposes of the study. I understand that the researchers will edit out from these recordings, or from descriptions of the recordings, as much identifying information as is possible ☐

I agree to take part in the above study ☐

Name of Participant	Date	Signature
______________________	______________	___________________

Appendix H (i) Information Sheet for Part 1

The
University
Of
Sheffield.

Department Of Psychology.

Clinical Psychology Unit.

Doctor of Clinical Psychology (DClin Psy) Programme
Clinical supervision Training and NHS research
Training & consultancy.

Clinical Psychology Unit
Department of Psychology
University of Sheffield
Western Bank
Sheffield S10 2TN UK

10th August 2010: Version 3

Information Sheet – Interviews

Discussing Content of Voices with People who hear voices

You are invited to take part in a brief interview. Before doing so it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Ask me if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part. Thank you for reading this

What is the purpose of the study?

There is relatively little research into the area of discussing content and meaning of voices with people who hear voices so it may be a useful gap to address. The existing research shows there are wide-ranging views about doing this so it could be helpful to discover more about the factors influencing a decision whether or not to do so.

Why have I been chosen?

You have been identified as someone who works with people who hears voices or cares for someone who hears voices.

Can I definitely take part?

If more people wish to take part than are required, unfortunately I will not have time to interview everyone. In this case I will select participants based upon availability and your profession/Team in order to gain a good range of participants.

Do I have to take part?

No. The decision to take part is entirely up to you.

Can I withdraw from the study at any time?

You are free to refuse to join the study and may withdraw at any time or choose not to answer certain questions however after the researcher has analysed the data, it might be too late to change the questionnaire constructed from this.

What do I have to do?

You would spend about 20 minutes (depending on how much you wish to say) in a private room with me at your usual base. I would ask you a few questions to help you discuss your views on the topic. This would be tape-recorded as I will not be able to remember everything that is said.

Will the things I say be kept confidential?

Anything you say will be treated in confidence, no names will be mentioned in any reports of the study and care will be taken so that individuals cannot be identified from details in reports of the results of the study.

However, as good practice requires, if I consider that you may be at risk to yourself or others as a result of any of the information that you have given me, then I will be required to follow standard procedures for ensuring safety according to the British Psychological Society Code of Practice. However I will always endeavour to discuss this with you before doing so. In addition, if you become distressed or concerned about any issues that arise then you will be encouraged to seek appropriate support through your GP or alternative sources of support.

What would happen to the tapes?

The only people who would listen to the tapes are myself, a transcriber employed by the university or my supervisors Dr Rebecca Knowles and Prof. Gillian Hardy. All are bound by the same requirements to keep the data confidential. Small parts of the recordings may be quoted within the write up of the thesis or publications that result from it. If this were the case, all names and any factors that may identify you would not be included, so confidentiality would be maintained. All tape recordings would be destroyed after the work was completed.

What will happen to the results of the research study?

The interviews are the first part of a larger study. Themes from the interviews will be used to construct a questionnaire for the second part of the study. The results of the study will be analysed and written up as my research project for the Doctor of Clinical Psychology course at Sheffield University. I will also seek to have the research published in a relevant journal.

If I’ve agreed to the first part of the study, do I have to take part in the second part?

No. The two parts are being organised like separate studies. You could choose to take part in part one, part two, both or neither.

What do I do if I wish to make a complaint?

If you have a complaint about the conduct or the content of the study then you should contact my research supervisor Prof. Gillian Hardy on **0114 2226571** or by email at **g.hardy@sheffield.ac.uk.** If you are not satisfied with the response**,** you can also use the University of Sheffield complaints procedure by contacting Dr. P. Harvey, Registrar and Secretary, University of Sheffield, Firth Court, Western Bank, Sheffield, S10 2TN

Contact for Further Information

You can contact the researcher (Diana Macleod) at the Sheffield University Clinical Psychology Unit, Western Bank, Sheffield. S10 2TP. The best way to contact me is by emailing pcp08dcm@sheffield.ac.uk. If you want to discuss the study by telephone you can either email me and ask me to call you back or telephone the research support officer on 0114 2226650. She will then leave a message for me asking me to telephone you back.

✂---

Reply Slip

Please tick a box, fold the sheet, and place in the ‘bin’ provided

I want to take part in the above study - Name: ______________________________ ☐

I do not want to take part in the above study ☐

Appendix H (ii): Part 2 Information Sheet

The University Of Sheffield.

Department Of Psychology.

Clinical Psychology Unit.

Doctor of Clinical Psychology (DClin Psy) Programme
Clinical supervision Training and NHS research Training & consultancy.

Clinical Psychology Unit
Department of Psychology
University of Sheffield
Western Bank
Sheffield S10 2TN UK

10th August 2010: Version 3

Information Sheet – Questionnaire

Discussing Content of Voices with People who hear voices

You are invited to fill in the following questionnaire. Before doing so it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Take time to decide whether or not you wish to take part. Thank you for reading this.

What is the purpose of the study?

There is relatively little research into the area of discussing content and meaning of voices with people who hear voices so it may be a useful gap to address. The existing research shows there are wide-ranging views about doing this so it could be helpful to discover more about the factors influencing a decision whether or not to do so.

Why have I been chosen?

You have been identified as someone who works with people who hears voices or cares for someone who hears voices.

Do I have to take part?

The decision to take part is entirely up to you. You may decide to withdraw at any time by exiting the website. However, as the information that you are providing is given anonymously, once you have sent the information by clicking the **Submit Data** button on the website, or given in your paper questionnaire it cannot be withdrawn.

What do I have to do?

All that is required is that you fill in the items in the following questionnaires adhering to the instructions given to you.

Will my taking part in this study be kept confidential?

This questionnaire will be submitted anonymously. The University of Sheffield will not seek to identify users unless it has a specific suspicion that its systems are being abused, in which case an investigation will take place in accordance with the university's normal security procedure.

What will happen to the results of the research study?

The results of the study will be analysed and written up as my research project for the Doctor of Clinical Psychology course at Sheffield University. I will also seek to have the research published in a relevant journal.

What do I do if I wish to make a complaint?

If you have a complaint about the conduct or the content of the study then you should contact my research supervisor Prof. Gillian Hardy on **0114 2226571** or by email at **g.hardy@sheffield.ac.uk.** If you are not satisfied with the response**,** you can also use the University of Sheffield complaints procedure by contacting Dr. P. Harvey, Registrar and Secretary, University of Sheffield, Firth Court, Western Bank, Sheffield, S10 2TN

Contact for Further Information

You can contact the researcher (Diana Macleod) at the Sheffield University Clinical Psychology Unit, Western Bank, Sheffield. S10 2TP. The best way to contact me is by emailing pcp08dcm@sheffield.ac.uk. If you want to discuss the study by telephone you can either email me and ask me to call you back or telephone the research support officer on 0114 2226650. She will then leave a message for me asking me to telephone you back.

Appendix I: Interview Schedule

(Developed from Francis et al., 2004)

“Thank you for agreeing to take part in the interview. It is really appreciated. Before we begin, I would just like to run through a few things. Everything you say will be treated in confidence, no names will be mentioned in any reports of the study and care will be taken so that individuals cannot be identified from details in reports of the results of the study.

However, as good practice requires, if I consider that you may be at risk to yourself or others as a result of any of the information that you have given me, then I will be required to follow standard procedures for ensuring safety according to the British Psychological Society Code of Practice. However I will always endeavour to discuss this with you before doing so. In addition, if you become distressed or concerned about any issues that arise then I will encourage you to seek appropriate support through your GP or alternative sources of support.

“ When you think of people who hear voices for this interview, it is referring to service-users you come into contact with or someone you care for who experiences auditory hallucinations. It does not matter for this interview which diagnosis they have. For example they could have schizophrenia, drug induced psychosis, Bipolar Disorder, another diagnosis or no diagnosis.

Discussing the content and meaning of voices is referring to either actively encouraging a conversation or continuing a conversation initiated by someone who hears voices, about things such as what the voices are saying, what the person thinks the relevance of this might be, links to their life and past or present events.

This might occur for staff during a home visit, as part of a formal consultation or informally, for example when talking to a client in the smoking area. Similarly, it may occur in a variety of situations for carers. It could last for just a few minutes or much longer.

To make things easier, all the above will be condensed into the following phrase: “Discussing the content of voices with someone who hears voices.”

Feel free to ask me to repeat a question or to tell me if any of the questions aren’t clear. Have you got any questions before we start?

- What do you believe are the advantages of discussing the content of voices with someone who hears voices?
- What do you believe are the disadvantages of discussing the content of voices with someone who hears voices?
- Is there anything else you associate with your own views about discussing the content of voices?

- Are there any individuals or groups who would approve of you discussing the content of voices with someone who hears voices?
- Are there any individuals or groups who would disapprove of you discussing the content of voices with someone who hears voices?
- Is there anything else you associate with other people’s views about discussing the content of voices?

- What factors or circumstances would enable you to discussing the content of voices with someone who hears voices?

- What factors or circumstances would make it difficult or impossible for you to discussing the content of voices with someone who hears voices?
- Are there any other issues that come to mind when you think about discussing the content of voices?

- What feelings do you associate with discussing the content and meaning of voices?

  Prompt: What makes you feel like that?

Appendix J: Letter to team managers

The University Of Sheffield.

Department Of Psychology.

Clinical Psychology Unit.

Doctor of Clinical Psychology (DClin Psy) Programme
Clinical supervision Training and NHS research Training & consultancy.

Clinical Psychology Unit
Department of Psychology
University of Sheffield
Western Bank
Sheffield S10 2TN UK

Dear ,

My name is Diana Macleod and I am a third year trainee clinical psychologist on the University of Sheffield Doctor of Clinical Psychology Course. As part of my research thesis, I am investigating staff's views about discussing the content and meaning of voices with people who hear voices. This is an important study as there is very little research to date in the area and so it will be addressing a gap in the literature. I am basing my research upon the Theory of Planned Behaviour model (Ajzen, 1985, 1988, 1991).

The study has received ethical approval from the National Health Service Ethics Committee and the request to recruit participants is being made to all ____ staff teams who work with people who hear voices.

I would like to invite your staff team to participate. There are two parts to the research, interviews and a questionnaire. You are invited to take part in either part or both.

PART 1

It would be really helpful to spend approximately 5 minutes in one of your team meetings explaining the study to staff. The study would involve interviewing a few staff members who wished to take part for approximately 15 minutes each in a quiet room within your work premises.

PART 2

After analysing the interviews I will be using them to construct a questionnaire about discussing the content and meaning of voices. I would need to visit your team briefly during one of your team meetings to explain the study and hand out the questionnaires. The questionnaire takes approximately 5 minutes to complete. It would be really helpful if time could be allocated for completing this at the end of the meeting (for those who choose to participate). I could then leave a 'bin' for people to post their questionnaires to that I would collect at the end of the meeting. In addition, it would be helpful if the team administrator could email the team with a link to the questionnaire for those staff who may not be present at the meeting.

If you have any queries you can contact me at pcp08dcm@sheffield.ac.uk or my research supervisor, Prof. Gillian Hardy on g.hardy@sheffield.ac.uk. The best way to contact me is by emailing. If you want to discuss the study by telephone you can either email me and ask me to call you back or telephone the research support officer on 0114 2226650. She will then leave a message for me asking me to telephone you back. I will follow up this letter with a telephone call in the next few weeks. I look forward to speaking to you.

Yours Sincerely,

Diana Macleod

Trainee Clinical Psychologist

Appendix K. Example of Interview Coding Table

Category - Disapprove

Category	C1	C2	C3	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10
Religious/cultural groups													
Medical Profession / pharmaceutical companies													
Service-User													
Family/carers													
Certain members of the public													

Appendix L – Example Email invitation

Dear ,

I am a Trainee Clinical Psychologist with Sheffield University. Attached to this email is an information sheet about a confidential questionnaire study that I am running about your views on discussing the content of voices with people who hear voices. On the information sheet you will find a weblink that will take you to the questionnaires if you would like to take part. The questionnaire will take 5-10 minutes to complete. I will also be visiting your next team meeting where I can explain more and answer any questions you may have. There will be the opportunity to fill out a paper questionnaire there. Your views will be a valued part of the research.

Thank you for taking the time to read this email
Diana Macleod
Trainee Clinical Psychologist

Appendix M. Transcriber Agreement

This has been removed for copyright purposes as it has third party information.

Appendix N. Tables of categories obtained from analysis of interviews with example quotations

Table 1.

Indirect Measure of Attitude (Behavioural Beliefs) Categories from Analysis of Interviews

Category	Sub category	Number of interviewees	Example quotes
Advantages	- Inform/aid treatment	8*	• because, depending on what you say to the doctor they will give you one type of drug or another • my view on it has always been the more information you've got the better treatment you can provide for somebody
	- Make better/ positive impact on service-user	8*	• because they discuss it with you they feel more relaxed • I think it can help to reduce the stress
	- Give staff better understanding, including understanding causes	7*	• it just means that (.) I don't get any, again that word insight or understanding of how he's feeling and how (.) it's affecting him • Er, so the advantages in terms of understanding the impact on their life, understanding their perception of the voices and where they come from, how much control they think they have over them, what the source of the voices are
	- Give service-user better understanding, including understanding of causes	7*	• To help them understand, erm, what the thoughts are telling them • for people then to move on really to put the voices and delusions into some context
	- Validating/normalising/ focusing on what is pertinent to them	6	• If I didn't discuss that with him, we wouldn't really be talking about any of the reality of his life • they have experiences that are probably not mainstream experiences, so they have to sort of convince themselves somehow that there is some normality to this and I think the best way of doing that is to, I mean the sense of context to see where they and their past experiences fit into current life.

* Sub category that was used in the questionnaire

Table 1 (continued).

Indirect Measure of Attitude (Behavioural Beliefs) Categories from Analysis of Interviews

Category	Sub category	Number of interviewees	Example quotes
Advantages (continued)	- Improved relationship with service-user	2	• Erm (.) I'd imagine that, I mean you'll get a better relationship with your, your patient if you ask because I think patients want to talk about it • discussing these things they feel like they can approach you when they're struggling, they feel (.) more able to tell you anything
	- Providing something that others can't	3	• perhaps they might not get that ally, that outlet within say a family setting or something like that • for some people it's a relief to find somebody who doesn't think they're mad talking about their voices
Disadvantages	- Make worse in short-term/ cause distress	9*	• I mean again a person can find it distressing, • There are more disadvantages, because it might, erm (.)don't know what to say, it might increase the voices, increase their agitation
	- Negative reaction of service-user	5*	• if you did try to discuss it with him he got very agitated and angry and ….I don't want to talk about it, shut up about it • they may get so angry and upset
	- Raises issues of what to do with the info you get / lack of adequate follow on support e.g. psychology	4*	• Well I suppose there's the notion of what do you do with afterwards if you've got the information, • Well you have to do something with the information and, er (.) trying to access the psychology is very hard,

* Sub category that was used in the questionnaire

Table 1 (continued).

Indirect Measure of Attitude (Behavioural Beliefs) Categories from Analysis of Interviews

Category	**Sub category**	**Number of interviewees**	**Example quotes**
Disadvantages (continued)	- Collusion	2	• I think you have to be careful how you discuss it so that you're not feeding into any psychosis that they've got so that you make sure that while discussing it there's a clear line drawn that this is what you're hearing but it isn't real • I don't know, it's possible that I might be seen as colluding or something but, but I don't know really that's just pure speculation
	- Focus on negatives	1	• you sometimes only focus on the negatives if you're not careful
	- It puts you in the minority	1	• I think, er, as a doctor promoting the notion that (.) the voices will have some sort of meaning that puts you in a sort of, erm (.) a sort of radical camp if you want
	- Coercive if they don't want to	1	• I always discuss the content so, er, (.) what are the disadvantages? Well I guess some people don't want to talk about them (.) certainly so I guess that would be a disadvantage to force people
	- Interferes with existing coping strategies	2	• (.) I don't know whether that's, he doesn't discuss it because he feels that it, it's (.) breaching the barrier, you know, and he holds it back, or it helps him to hold it away from him most of the time, • Erm (coughs) somebody might, you know, their coping strategy might be to try and ignore the voice
	- Time consuming/used as avoidance	1	• if he goes back into the philosophy of the content of the voices too much you can lose the entire hour you've got with that person without getting any closer to the goals that that person wants to achieve
	- Set up to fail (if think ok to talk about and family not as accepting)	1	• I mean I suppose some people might find that they can openly discuss stuff with other professionals and when they try to have those discussions outside those circles with friends or family or people who haven't had those experiences, initially I think they find it quite difficult, erm (.) because some people maybe aren't as accepting of those experiences

* Sub category that was used in the questionnaire

Table 2.

Indirect Measure of Subjective Norm (Normative Beliefs) Categories from Analysis of Interviews

Category	**Sub category**	**Number of interviewees**	**Example quotes**
Approve	- Staff	6*	• well the whole multi-disciplinary Team I would imagine would approve of you • all of us on the ward really
	- Family/carers	3	• their families have been happy • I've got another daughter who would probably approve, yes
	- Service-user groups	7*	• I think like the hearing voices network • I think generally speaking most user groups would advocate and do discuss voices with people
	- Psychology/recovery perspectives	2	• Erm (.) I guess as a professional group psychologists would think about the content and the context of it • from recovery perspectives, erm, you know there's a wide range
	- Service-user	2	• most people I've worked with are very happy to talk to me • from service-user perspectives
	- Religious/spiritualist groups	2	• (.) Well I guess theoretically th- that, erm, y- you might get sort of religious, er, approval or disapproval • some of the more evangelical churches in ______ can be quite encouraging

* Sub category that was used in the questionnaire

Table 2 (continued).

Indirect Measure of Subjective Norm (Normative Beliefs) Categories from Analysis of Interviews

Category	**Sub category**	**Number of interviewees**	**Example quotes**
Disapprove	- Religious/cultural groups	5*	• do I belong to an extreme religious sect that will not discuss it or something • (.) Well I guess theoretically th- th- that, erm, y- y- you might get sort of religious, er, approval or disapproval
	- Medical profession/pharmaceutical companies	4*	• I have a view that, erm, the medication and the pharmaceutical companies sort of, er, er, drive the way psychiatry's practised • The majority of psychiatrists would disapprove and I think a big chunk of nurses would disapprove as well
	- Service-user	3	• Yeah, well, probably quite a lot really, I mean a lot of people don't want to talk about them • Well they've got like service-users (.) who just don't want to talk about their voices
	- Family/carers	3	• Erm, I think sometimes carers can find it difficult when we encourage people to talk about their experiences • they're very keen for us to be involved with them and actively try to support them and that's one of the best ways we can
	- Certain members of the public	3	• Yeah, I mean the general public do • yes, the people who, who, who don't believe in (.) mental illness, who don't, don't believe that these things happen (.) and there are individuals that believe that.

* Sub category that was used in the questionnaire

Table 3.

Indirect Measure of Perceived Behavioural Control (Control Beliefs) Categories from Analysis of Interviews

Category	**Sub category**	**Number of interviewees**	**Example quotes**
Enable	- Right time and place	8*	• you take them to another quiet room • I suppose just w- working through that in kind of a safe space
	- Good relationship/trust	9*	• Erm, I think it's, you have to establish a rapport with somebody • Well, therapeutic relationship
	- Service-user wants to	7	• the patient has to perceive an advantage before they can start talking about them. • if the person wants to
	- Right approach	5*	• …who can talk to him in a certain way • the nature that it's done, that it's in an empathic way and an understanding way.
	- Structure	3	• I find that a formula or a questionnaire that's well structured and open enough contains the interview slightly • it might be better in a structured sort of way
	- Time/capacity	5	• Oh I think it's time, that, and I work in a ___ Team and presently we're afforded time with people • so I think, I think time is on our side in our Team, we have smaller case loads, I think in this Team
	- Training	2	• it depends on people's skill and level of training as well when they're listening quite distressing content from people and whether they're able to manage that and whether they've got good training enables, that enables them to be able to do that effectively • I mean, I, a lot of my, my training has, has been kind of through nursing but then through PSI Training so I've done quite a lot around kind of working in a person centred way and, you know, addressing the voices and working with people around those issues. I think I'm more able now to do that.

* Sub category that was used in the questionnaire

Table 3 (continued).

Indirect Measure of Perceived Behavioural Control (Control Beliefs) Categories from Analysis of Interviews

Category	**Sub category**	**Number of interviewees**	**Example quotes**
Enable (continued)	- Having background info/knowledge of coping skills	3	• I mean it's (.) it's really down to the particular person and, and knowing, er, how best they cope with the voice really • having some background information and being able to put things together
	- Support from staff	1	• so that she's got a CPN there
	- Power imbalance/Title of MH worker	2	• patients come to see consultants and y- y- you know the, the, the, the setting is, er, you know, there's a power imbalance in the setting. (.) In the main you can get people to, to be honest with any question you ask really because you, because of the setting • having a mental health worker title can make it easier because people are, expect you to be asking them about things like that
	- Currently hearing voices	1	• if he starts hearing voices again or seeing things I'd have to talk to him about it
	- When it's relevant to the work/service-user sees the relevance	2	• when it arises as part of what I do with that person, rather than it being (.) today we're going to talk about (.) voices • they think well how, how is that relevant
	- Demonstrating happy to talk about it	1	• Well it implies that I'm going to, erm, that I'm happy to discuss it further otherwise I guess I wouldn't have asked it in the first place

* Sub category that was used in the questionnaire

Table 3 (continued).

Indirect Measure of Perceived Behavioural Control (Control Beliefs) Categories from Analysis of Interviews

Category	**Sub category**	**Number of interviewees**	**Example quotes**
Make difficult	- Lack of privacy	7	• if it's in a place that I don't think is appropriate because it's, it's not, erm (.) it's not sort of confidential • if there are family members around, there's no privacy
	- Service-user doesn’t want to	8	• he doesn't like talking about things • I think you've got some patients who don't want to discuss (.) voices, or their voices, and you've got people who do, absolutely hate discussing their voices
	- Too distressed/unwell/currently hearing voices	5	• I don't think I would do it while they were still hearing voices • they might find it too distressing
	- Lack of time/capacity/funding	6	• perhaps in a more pressured team where you see more clients, less time, those conversations will be more difficult to have really • I think that's going to disappear with pressures from the government with funding and things like that
	- Lack of insight	5	• When C comes he'll say, I'm alright, nowt wrong with me • (.) I think sometimes, er, er, the insight issue, some people have got very little insight
	- Too drugged up	1	• Er, what would stop it? If somebody's too drugged up
	- The topic is quite private	2	• He's never known, he's never liked anybody knowing his business • you know, it's quite private
	- Lack of relationship	2	• because somebody doesn't like you, doesn't have that rapport, • not having that relationship with, you know, somebody

* Sub category that was used in the questionnaire

Table 3 (continued).

Indirect Measure of Perceived Behavioural Control (Control Beliefs) Categories from Analysis of Interviews

Category	**Sub category**	**Number of interviewees**	**Example quotes**
Make difficult (continued)	- You're part of their delusion	1	• you might be part of their (.) delusion, you might, they might feel (.) quite persecuted by you so I guess before you're (.) going into hear, to talking or thinking about content that it's important to know what part, how they perceive you
	- Too scared	4	• I think he's just frightened of (.) if he talks about things that the, they're going to take him away • some people might just be so scared that they can't talk about them
	- Untrained	2	• sometimes as professionals I think we can be untrained and can end up at a bit of a loss as to what to do • (.) if someone was (.) looking to me for some insight beyond my sort of informed lay person, then I wouldn't be able to provide that
	- Being too close to the person	1	• he'll not listen to me or his mother because we're too familiar,
	- It's too close to home	1	• Yeah, because I mean I, I've had the same problems at home

* Sub category that was used in the questionnaire

Table 4.

Feelings Categories from Analysis of Interviews

Category	**Sub category**	**Number of interviewees**	**Example quotes**
Feelings	-Fear/anxiety/apprehension	7*	• it can feel quite scary • most people are quite, erm (.) apprehensive about talking about it
	- Distress/sadness/ discomfort	7*	• you've got other staff members who don't, who don't feel comfortable • it really upset me
	- Excitement	1	• sometimes it's exciting because it's incredibly interesting
	- Empathy/sympathy	2	• I feel sorry for them (.) because I’ve been through this • Yeah, I suppose there is, there's, erm (.) empathy
	- Respect	1	• having respect for people
	- None/Try to block out	3	• I don't think I’ve any feelings at all really • I think to a certain extent you have to block out certain feelings
Reason for feelings	- Reaction of service-user e.g. become violent	6	• and always in the back of my mind is if the voices really want to prove that they've got power over me would they ask that person to do something to me • I think it's the whole stigma associated with voices because it's against this whole, you know, voices being negative about people, wants to harm you or harm your children
	- Sense of uncertainty/lack of control	2	• what things make it scary? A sense of uncertainty, not being able to control something • it's, it's apprehension because (.) you're always treading on egg shells
	- Not knowing how to respond	2	• I wouldn't have the answers so if someone tells me, oh I'm hearing the devil speak to me, telling me to go and kill myself, you'd be then like, you wouldn't know what to do with that information • can be difficult to know what to do with it

* Sub category that was used in the questionnaire

Appendix O. Questionnaire guide, scoring and scale construction

Reference	Response Format	Items requiring reverse scoring	Items requiring internal consistency analysis	Items requiring multiplication	Construct measured
p. 5. 1 A-G	1 to 7			1 × 13; 2 × 14; 3 × 15; 4 × 16; 5 × 17; 6 × 18	Behavioural Beliefs
P.5 2 A-G	-3 to+ 3				Outcome Evaluations
P.6 1 A-D	-3 to + 3			19 × 27; 20 ×28; 21 × 29; 22 × 30	Normative Beliefs
P.6 2 A-D	1 to 7				Motivation to comply
P.7 1 A-F	1 to 7			7 × 31; 8 × 32; 9 × 33; 10 × 34, 11 × 35, 12 × 36	Control Belief Strength
P.7 2 A-F	-3 to + 3				Control Belief Power
P. 8 1A-D	1 to 7	B and D	A to D (after recoding)		Attitudes, direct measure
P.9 1A,1 C, 3B	1 to 7	1A	1A (after recoding), 1C, 3B		Subjective Norms, direct measure
P.9 1D, 1E, 2	1 to 7	2	1D, 1E and 2 (after recoding)		Perceived Behavioural Control, direct measure
P.9 1B, 3A, 3C	1 to 7				Intention statement
P.9 4					Biomedical Orientation
P.10 1, 4					Fear
P.10 2,3					Past Behaviour
P.10 5,6					Current Behaviour
P.10 7, 8, 9					Anticipated Affect

Scale Construction

The TPB uses three constructs to predict Intention: Subjective Norm, Perceived Behavioural Control and Attitude (see Introduction section for more detail). These were each measured directly and indirectly. For the direct measures, the questionnaire contained several questions for each of these constructs. These were worded in broad and general terms (e.g. People would approve of me…). In addition, part 1 used interviews to identify the specifics for each construct (e.g. *service-user* groups would approve). These are known as the indirect variables. For each of the three indirect TPB constructs (Behavioural Beliefs, Normative Beliefs, Control Beliefs) several questions were asked in order to include several of the most pertinent issues within that construct, obtained from the interviews (see Part 1 Results).

For each issue of the indirect TPB variables, one question asked how likely something was (e.g. “Service-user groups would approve of me discussing the content and meaning of voices”) and another asked how important that outcome was (e.g. “The approval of service-user groups is important to me”). Responses were on a 7-point Likert Scale (e.g. Strongly agree to strongly disagree). These two scores were multiplied together for each participant. Then a Sum of these multiplied numbers was taken from all the items measuring the same construct. This is standard TPB procedure (Francis et al., 2004).

For the direct TPB variables (Attitude, Subjective Norm, Perceived Behavioural Control) and the dependent variable (Intention), a mean of all the questionnaire items measuring that variable was calculated according to standard TPB procedure (Francis et al., 2004) however there were some issues with the internal reliabilities of these addressed below.

Appendix P. Significance Statistics from ANOVA assessing differences between Intention of the groups within Team after it was recategorised

Statistic	Groups	Significance
Bonferroni	Carer – IIPC	.002
	IIPC – Carer	.002
	Other – Carer	.031
Hochberg	Carer – IIPC	.002
	IIPC – Carer	.002
	Other – Carer	.030

Appendix Q. Skewness and Kurtosis Statistics for variables entered in the Hierarchical Multiple Regression Analysis

Skewness and Kurtosis Statistics calculated from z = S/SE (S) where S is the skewness or kurtosis statistic and SE is the standard error of that statistic.

Variable	Skewness	Kurtosis
Mean Self Efficacy	3.48*	0.02
Subjective Norm Direct Measure 3	- 5.53*	3.42*
Mean Attitude Direct Measure	-3.96*	1.33
Mean Intention	-5.35*	2.13
Attitude Indirect Sum	-4.66*	1.38
Subjective Norm Indirect Sum	0.67	1.50
Perceived Behavioural Control Indirect Sum	0.83	0.01
Mean Fear	5.39*	2.04
Mean Anticipated Affect	2.35	0.57

* Where z was more than 3, skewness or kurtosis was significant at the $p < .001$ level

Appendix R. Skewness and Kurtosis Statistics for individual indirect TPB variables entered in the Multiple Regression Analysis

Skewness and Kurtosis Statistics calculated from z = S/SE (S) where S is the skewness or kurtosis statistic and SE is the standard error of that statistic.

Variable	Skewness	Kurtosis
Behavioural Belief 1	- 0.94	- 2.28
Behavioural Belief 2	- 5.22*	1.32
Behavioural Belief 3	0.29	0.02
Behavioural Belief 4	- 6.48*	5.77*
Behavioural Belief 5	- 4.36*	0.24
Behavioural Belief 6	- 4.02*	0.33
Behavioural Belief 7	- 1.46	0.37
Normative Belief 1	- 3.45*	3.11*
Normative Belief 2	- 1.12	- 1.02
Normative Belief 3	3.46 *	3.70*
Normative Belief 4	- 1.89	0.74
Control Belief Strength 1	- 2.18	- 0.72
Control Belief Strength 2	- 2.08	- 0.84
Control Belief Strength 3	- 0.53	- 1.94
Control Belief Strength 4	- 3.88*	3.60*
Control Belief Strength 5	-1.56	- 1.22
Control Belief Strength 6	- 1.70	- 0.61

* Where z was more than 3, skewness or kurtosis was significant at the $p < .001$ level

Appendix S. Summary of Multiple Regression Analysis for the Individual Items Obtained from Interviews Predicting Intention

Variable	B	SE B	β	t	P
Behavioural Belief 1	-.021	.016	-.133	-1.37	.174
Behavioural Belief 2	-.201	.107	-.216	-1.88	.063
Behavioural Belief 3	.015	.016	.079	.926	.356
Behavioural Belief 4	-.002	.017	-.010	-.101	.920
Behavioural Belief 5	-.080	.119	-.083	-.671	.504
Behavioural Belief 6	-.213	.130	-.211	-1.63	.105
Behavioural Belief 7	.005	.015	-.030	.356	.722
Control Belief Strength 1	.014	.012	.107	1.13	.261
Control Belief Strength 2	-.027	.015	-.172	-1.87	.064
Control Belief Strength 3	.018	.012	.143	1.50	.136
Control Belief Strength 4	-.016	.013	-.116	-1.29	.199
Control Belief Strength 5	< .000	.010	-.001	-.014	.989
Control Belief Strength 6	-.002	.010	-.017	-.170	.865
Normative Belief 1	-.001	.019	-.004	-.038	.969
Normative Belief 2	.034	.014	.224	2.36	.020
Normative Belief 3	.006	.015	.031	.391	.697
Normative Belief 4	.034	.017	.212	1.94	.055